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ABSTRACT

This guide contains all instructor materials and requirements for the National Highway Traffic Safety Administration (NHTSA), Emergency Medical Dispatch (EMD) National Standard Curriculum. It includes lesson plans, instructional aids, and tools and supporting information designed to elevate trained and experienced public safety telecommunicators to direct and manage their emergency medical resources effectively. The course provides EMD trainees with the skills and knowledge necessary to dispatch resources for medical emergencies. The course is broken down individual topics called modules. Each module is further sequenced into units. The four modules in the course cover the following: (1) basic emergency medical dispatch concepts; (2) information gathering and dispatch; (3) introduction to the Emergency Medical Dispatch Protocol Reference System and 32 chief complaint types; and (4) final examination. Two appendixes contain presentation skills and training hints, and sample scenarios for use in training. A student guide includes the four modules and a glossary. (KC)

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ED 425 308

Emergency Medical Dispatch
National Standard Curriculum
Instructor Guide
Trainee Guide

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Emergency Medical Dispatch

Instructor Guide

U.S. Department of Health & Human Services
Public Health Service
HRSA
Health Resources & Services Administration
Maternal & Child Health Bureau

NHTSA
People Saving People

National Highway Traffic Safety Administration

Emergency Medical Dispatch: National Standard Curriculum

INSTRUCTOR GUIDE

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OVERVIEW

This guide contains all instructor materials and requirements for the National Highway Traffic Safety Administration, Emergency Medical Dispatch National Standard Curriculum. It includes lesson plans, instructional aids and tools and supporting information. Before teaching this course, you should be thoroughly familiar with the course content and the contents of the Instructor Guide and the Trainee Guide. Please read this entire Introduction before proceeding any further.

NOTE: Throughout this document you will see the acronym EMD. This acronym has two meanings. EMD can mean "Emergency Medical Dispatcher" or "Emergency Medical Dispatch," depending on the context in which it is used.

COURSE DESCRIPTION

This EMD Course is a 24-hour minimum course designed to elevate trained and experienced public safety telecommunicators to effectively direct and manage their emergency medical resources. This course primarily focuses on end user productivity in obtaining information from callers, selecting the proper protocol, dispatching proper resources and giving telephone medical instructions. Other areas of significance are the basic philosophy of EMD, legal concepts important to the EMD's job and basic medical concepts necessary for understanding the medical content of emergency medical dispatch.

This course will provide EMD trainees with the skills and knowledge necessary to effectively dispatch resources for medical emergencies. The course is broken down into individual topics called modules. Each module is further sequenced into units. The modules and units were developed based on the behavioral learning objectives established. These behaviors represent the required behaviors of effective EMD personnel.

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COURSE GOALS AND OBJECTIVES

The overall goal of the NHTSA EMD Course is to:

- Ensure that all users possess the baseline knowledge, skills and abilities to successfully function in the role of EMD call-taker or dispatcher.

To ensure the trainees meet the stated objectives, the course involves a variety of instructional methods and media. These are described in this Introduction and in the lesson plans.

AUDIENCE DESCRIPTION

This course is designed for public safety dispatchers who require instruction in the medical content of emergency medical dispatch. It is assumed that these users have little or no prior knowledge in the medical aspects of emergency medical dispatch but have completed a basic telecommunicators course (or comparable experience). The main areas of instruction will focus on the telephone skills required to get information, resource allocation and the Emergency Medical Dispatch Protocol Reference System (EMDPRS).

Ideally, course participants will be from the same agencies; however, when this is not the case, participants will be expected to train with the EMD protocols from their respective employing agencies. The course should be modified to meet local needs that have been identified by local medical authorities and the EMD guidance committee. An effort has been made to ensure that the course content is generic enough to encompass all of the major areas for instruction, without being so specific that it cannot be modified for local needs.

INSTRUCTOR AND COURSE REQUIREMENTS

This course is instructor-facilitated. This means that the instructor is responsible for training participants, coordinating instructional activities and ensuring objectives are met.

The instructor(s) for this course shall possess thorough knowledge of emergency medical dispatching and the working environment of public safety telecommunicators. Instructors selected for this course shall also have proven competency as instructors in other courses, have proficiency in the skills and concepts that are being taught in this course and shall have successfully completed a recognized EMD training course.

It is essential that the instructors for this course be capable of understanding, presenting and defending ALS level-Dispatch Life Support information. For the medical portion of this course, the instructor(s) shall have training, skills and experiences at the advanced Emergency Medial Technician (EMT) level (equivalent to EMT - Intermediate/ EMT-Paramedic). Alternately, the medical portion of this course can be taught by a critical-care trained physician, nurse or physician's assistant.

This high level of instructor qualification is due to the need for the instructor to facilitate trainee learning and understanding of the medical content of this training, and to facilitate their ability to interrogate and evaluate the information provided by callers. It is also required because trainees will need to be able to categorize caller information and appropriately assign predetermined response configurations and modes (adapted from ASTM standard F1552-94, section 5).

PARTICIPANT MATERIALS

The participants must be provided with a Trainee Guide and other materials during this course. The Trainee Guide Is the ***training course book*** that contains all the information, exercise aids, scenarios and other materials required to complete this course. It is presented in the order in which the course is taught.

The Trainee Guide is divided into four instructional ***modules***. Each module is separated by a tab. Each module contains reference data, exercise aids and other materials required to complete the course. The first page of each module describes the contents of that module. The module objectives are listed following each module description.

Each module is divided into ***units***. The first page of each unit describes the contents of that lesson. The lesson objectives are listed following each lesson description.

As the instructor, you should be very familiar with the contents of the Trainee Guide. Appropriate page references for using the guide in class are contained in the lesson plans.

INSTRUCTIONAL RESOURCES AND REQUIREMENTS

During this course you will use a variety of instructional resources. These include written materials, lesson plans, Instructor Guide (IG) Notes, exercise aids, presentation screens and an examination. Each is described on the following pages.

Unit Preparation. The unit preparation comes prior to the unit introduction. It provides a list of materials, policies, scenarios, etc. that you, the instructor, need to have prepared prior to teaching that particular unit.

Written Materials. The written materials required include the Trainee Guide described previously, supplemental handouts and this Instructor Guide. Use supplemental handouts as you feel appropriate for this course. Make sure this Instructor Guide is with you at all times during the course.

It is strongly suggested that the instructor provide quality examples/scenarios tailored to the participants' agency requirements.

Unit Plans. This guide contains trainee text for each module of this course. Each module lesson plan is separated by a tab. Refer to a lesson plan while you read the following description.

Each unit plan identifies the approximate time required to teach that module and its associated units. This time indication is approximate. Your actual time may be longer or shorter. You may find a need to spend more or less time on a topic, depending on the needs of the audience. Don't feel that this time indication is a rigid dictate. It is only a guide.

The ***Trainee Text*** column provides an identical copy of the trainee guide text and subject matter to be covered. The ***Instructor Notes*** column provides directions to the instructor and notes for presentation. Each note is associated with a line item in the outline. When you need to show a particular presentation screen, that screen is identified by number in this column. Trainee Guide page numbers are provided when you need to direct the participants to turn to a certain page in their books. In the Instructor Note column you will see references formatted like **<TG PAGE x-x>.** These tell you whenever there is a Trainee Guide page change. This way if trainees get lost, you can refer them to a specific page in their guides.

You can use the unit plans in several ways based on your own style of teaching and comfort level. First, use it to prepare for the course. Become familiar with the subject matter, the order in which it is to be taught and the facilitation of instructional activities and their solutions. Second, use it during the class to guide your presentation. Use it at both times as necessary. Don't forget that you can deviate from the plan as necessary to enhance your presentation or to meet the needs of a particular audience.

You may not, however, delete any material from this course. Additions to the course are acceptable, but the course contents provided here are the minimum content areas that should be covered.

Unit plans do not indicate when to take breaks. Because this course is instructor-facilitated and involves a variety of participant activities, the instructor should decide when to call a break and for how long.

IG Notes. IG Notes are support materials for use by the instructor which provide solutions to some of the exercises. They are contained at the back of the appropriate module. Become familiar with these and their use before teaching this class.

Exercises and Exercise Aids. Exercises are very important. Their main purpose is to reinforce concepts taught in the units. It is important that you use exercises frequently to reinforce learning. Frequent, short exercises are very helpful for adult learners, especially if they allow practice of a concept. They also help to break up the monotony and allow you to inject some "fun" into the lecture.

Exercise aids are used by the participants to complete a given exercise. These aids require the participants to record information or perform an activity. Each exercise aid is contained in the Trainee Guide and referenced where appropriate in the lesson plan. Become familiar with how to use each of these aids before teaching a class.

Presentation Screens. Overhead presentation screens are used in this course as visual teaching aids. Paper copies of each screen are contained in the back of each unit plan for the module in which they will be used. Each screen is numbered in sequence by module and unit. For example the number "3-1-1" means the screen is number 1 in sequence for Module 3, Unit 1. The screen numbers appear in the Trainee Guide and in your instructor lesson plan.

The transparencies are designed to be clear, straight forward indicators of topics to be discussed or content to be emphasized. They are in a bulleted text format. Make sure you are familiar with their contents before using them.

HINT: Don't use color transparencies. The colors tend to be irritating and distract from their original purpose of focusing trainees and instructors on the topics at hand.

Slides and transparencies are especially helpful when teaching certain confusing topics. This is especially important for topics like the medical section. Developing your own graphics for a presentation helps you to tailor the curriculum to the agency being trained.

Examination. This course includes an end-of-course examination, to be administered on the last day of the course. It consists of performance-based exercises related to the objectives throughout the course. Content areas to be included in the final examination are chosen by the local medical authority. This NHTSA curriculum suggests that the final examination (and other exams in the course) be based on the module and unit objectives.

You should evaluate each participant's performance after s/he completes the end-of-course examination. After the course, you should review exam performance for weak areas in the instruction and make adjustments as necessary.

EQUIPMENT, REFERENCE MATERIALS AND FACILITIES REQUIRED

A variety of equipment and facilities are required to present this course. Make sure they are available and ready prior to conducting the course.

Equipment. The following equipment is required to teach this course:

1. Overhead Projection System. Make sure the equipment is in working condition before the course begins. Also ensure that extra bulbs are available for proper use.

2. Chalk Board or White Board.

3. Chart paper and easel.

4. Mock-up telephone consoles (like those used in the local agency), or at a minimum, working telephones to conduct scenarios/scripts.

5. VCR and Audio cassette players for videos and audio tapes depicting "real-life" scenarios.

6. Participant Tables/Desks. Make sure the room contains tables or desks large enough for each participant to spread out a large volume of data.

Reference Materials. The following is a list of reference materials that should be located in the classroom for use by the participants throughout the instruction, in the exercises and as general reference. This list identifies minimum requirements. You may want to supplement this list with other materials that you find timely or appropriate.

1. Trainee's Guide

2. Instructor's Guide

3. Other documents selected by the instructor or designated for use by local authorities (like agency policy and procedure guides, final examinations, on-the-job training documents and medical references).

4. Audio and video tapes. It is important that you use any tapes you have access to in order to demonstrate dispatch in action. They can be used for critiquing EMD behaviors (good and bad), for demonstration purposes of how to deal with problem callers, or for practicing with guide cards. Just about any situation you can think of can be demonstrated through the use of audio or video cassettes. You can even make them up with a partner for use in your classes.

Facilities. The following facilities are required to teach this course:

1. A main classroom large enough to comfortably hold a maximum of 24 participants, instructional equipment, etc. Regardless of the number, the classroom should be large enough to comfortably seat everyone.

2. "Break-out" rooms (rooms where individual trainees, groups/teams of trainees or instructor-trainee pairings can retire to conduct exercises, practice using trainee materials or meet to review course materials)

3. Break area

HELP!

If for any reason you have a question about the design, content, etc. of this document or the course you are teaching, contact any of the people listed below. They should be able to help.

1. **Local Medical Authority/Program Medical Director**

2. **Communications Center Manager**

3. **Authorized Committee Member(s)**

MODULE 1
Basic Emergency Medical Dispatch Concepts

TRAINEE TEXT	INSTRUCTOR NOTES

MODULE OVERVIEW

Successful Emergency Medical Dispatch requires a complex combination of skills and knowledge. These skills, along with the knowledge required to develop them, are used daily to save the lives of people across this country.

<TG PAGE 1-1>

Review the module.

Module 1, Basic Emergency Medical Dispatch Concepts, introduces the basic concepts behind developing good emergency medical dispatch skills. It forms the basis for the rest of the course. As you progress through the module, you will learn and understand the roles and responsibilities you will have as an Emergency Medical Dispatcher (EMD).

This module presents the basic philosophy of emergency medical dispatch, including the roles and responsibilities of the EMD. It also presents basic information about legal and liability issues the EMDs face, as well as basic emergency medical concepts that you, as an EMD trainee, need to know to more effectively perform your duties.

Module 1 contains the following Units:

State the module units.

Unit 1:	*Introduction to the EMD Roles and Responsibilities*
Unit 2:	*Legal and Liability Issues in Emergency Medical Dispatch*
Unit 3:	*Introduction to Emergency Medical Concepts*

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MODULE 1
Basic Emergency Medical Dispatch Concepts

TRAINEE TEXT	INSTRUCTOR NOTES
MODULE OBJECTIVES	**State** the module objective(s).
Upon completion of this module, you will be able to:	It is very important that you review all unit and module objectives with trainees. This helps them to focus on the "flow" of the module or unit (and contents).
1. Describe the functions, roles and responsibilities of an effective EMD. 2. Identify legal and liability issues that the EMD faces. 3. Identify strategies to avoid litigation. 4. Describe medical concepts as they relate to the EMD function.	
MODULE DURATION	For instructor information only.
Approximately 4 hours.	

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MODULE 1
Unit 1 Instructor Preparation

Following are a list of questions and/or topics which appear in Unit 1, for trainees to answer and discuss. Although information is provided in the Trainee Guide and Instructor Guide, you should be prepared to discuss these questions/topics and give additional information and examples, based on local agency guidelines and your experience.

1. Why would you consider yourself an essential part of your EMS system?
2. What are five of the most common myths about EMDs? Why are they wrong?
3. What are your responsibilities as an EMD?
4. Describe local policy about HIV regulations.
5. How would you describe a successful EMD? What characteristics should one have? What kinds of things would a successful EMD do or not do? (Be prepared to give examples. We suggest you develop some scenarios of good and bad behavior. You will find some ideas and sample scenarios in Appendix B of this guide.)
6. Can you name resources commonly found in EMS systems? What resources are available in your EMS system?
7. Describe local EMS system tiers and response modes. If your trainees are from multiple agencies be sure to discuss any differences in tiers and response modes between the agencies.
8. When introducing the course, be sure to show the trainees the EMDPRS they will use. You can even pass it around, just be sure to tell the trainees not to worry too much about it yet.

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Module 1 - Unit 1
Introduction to the EMD Roles and Responsibilities

TRAINEE TEXT	INSTRUCTOR NOTES
UNIT OVERVIEW	
The roles and responsibilities of the Emergency Medical Dispatcher (EMD) vary, in some respects, by locale. However, there are some functions and characteristics common to all EMDs.	**<TG PAGE 1-3>** **Introduce** the unit.
Unit 1, Introduction to the Emergency Medical Dispatcher Roles and Responsibilities, introduces you to the basic concepts of Emergency Medical Dispatch. It provides you with information relating to the functions of the EMD and what it takes to be an effective EMD. Unit 1 also outlines the basic roles and responsibilities of the EMD and provides information about the three phases of the dispatch function. This unit forms the basis for the remainder of the course. Successful completion of this unit, therefore, is required to successfully complete the rest of the course.	
UNIT OBJECTIVES	
Unit Learning Objective	**State** the unit learning objective(s).
Upon completion of this unit, you will be able to:	
1. Describe the functions, roles and responsibilities of an effective EMD.	
Enabling Learning Objectives	
To meet the unit learning objective, you will:	
1.1. List/explain the five functions of the EMD.	
1.2. List the basic prerequisites to being a successful dispatcher.	

TRAINEE TEXT	INSTRUCTOR NOTES
1.3. Identify roles and responsibilities of the EMD. 1.4. List/explain the three phases of the dispatch function. 1.5. Describe the local Emergency Medical Service (EMS) system.	

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TRAINEE TEXT	INSTRUCTOR NOTES

ABOUT THE COURSE

Emergency Medical Dispatch involves the combination of telecommunication skills and medical knowledge. An Emergency Medical Dispatcher (EMD) must successfully master this body of skills and knowledge in order to be most effective in serving the public emergency medical needs as part of the local EMS system.

<TG PAGE 1-5>

Introduce the course and provide a brief overview.

The National Highway Traffic Safety Administration's *Emergency Medical Dispatch: National Standard Curriculum* is designed to provide this skill and knowledge. The course is an advanced public safety dispatch course, with its main emphasis on the medical side of emergency dispatching. This course does *not* focus on the telecommunications aspect of an EMD's job.

NOTE: This curriculum is designed for use when developing a locally relevant curriculum. It is not to be accepted as THE curriculum for any locale without first being reviewed, modified (as needed or required) and officially authorized by the local medical authority.

NOTE: Throughout this document you will see the acronym EMD. This acronym has two meanings. EMD can mean "Emergency Medical Dispatcher" or "Emergency Medical Dispatch," depending on the context in which it is used.

Tell trainees that "EMD" can stand for Emergency Medical Dispatch or Emergency Medical Dispatcher, based on the context in which it appears.

TRAINEE TEXT	INSTRUCTOR NOTES
The National Highway Traffic Safety Administration's *Emergency Medical Dispatch: National Standard Curriculum* is designed to provide enough material to ensure you will be able to: 1. State and identify the roles and responsibilities of an Emergency Medical Dispatcher; 2. Obtain sufficient and accurate information from callers to dispatch resources properly and efficiently; 3. Allocate resources properly and according to local medically approved protocols; 4. Recognize the need for and be able to recall EMS resources as appropriate and necessary; 5. Give appropriate initial emergency medical care instructions to callers as locally approved medical interrogation protocols indicate and 6. Understand the medical information found in locally approved Emergency Medical Dispatch Protocol Reference Systems (EMDPRSs).	**<TG PAGE 1-6>**
Icons You Should Know The following table shows icons you will see in the left column of this course. Each icon in the left column means something different. The meaning of each icon is:	**<TG PAGE 1-7>**

TRAINEE TEXT	INSTRUCTOR NOTES
☛ The hand icon tells you that you are reading something important. When you see this icon you should read carefully because you might see the information again in an exercise or exam.	**Describe** the hand icon.
✎ The pencil icon tells you that the instructor will probably elaborate at this point. You should take notes here because you may see the information again, in an exercise or exam.	**Describe** the pencil icon.
? When you see the question-mark icon, you have the chance to ask questions, or you may be given a question that you should be prepared to answer.	**Describe** the question-mark icon.
Table 1-1, Icon Legend	
Background Information/History	
First, the EMD is the primary and initial point of contact for callers seeking some sort of medical assistance. Second the EMD serves as a vital communication link between and among other parts of the Emergency Medical Service system.	**Tell** trainees that EMDs are the first point-of-contact that callers have when requesting EMS assistance.
Also, the EMD helps callers administer initial emergency medical care to patients who need assistance. In this respect, EMDs assist callers in saving the lives of patients in whose behalf they call.	
QUESTION: *Why would **you** consider yourself an essential part of your EMS system?*	**<TG PAGE 1-8>** **Ask** the question. Probe trainees for their points of view and provide any additional insight you may have.

TRAINEE TEXT

Introduction to Emergency Medical Dispatch

Common Misconceptions About EMD. Despite the obvious need for EMDs, there are many misconceptions about Emergency Medical Dispatch and EMDs. Some of these misconceptions are listed below.

1. *Callers are too upset to provide accurate and useful responses to the EMD.* Experience indicates that using the question sequences provided by the EMDPRS will allow you to elicit information necessary for effective dispatch.

2. *Callers would not be able to provide the EMD with required information that is necessary to effectively dispatch emergency medical resources.* The EMDPRS protocols are designed so that you can get the proper medical information you need for effective dispatch.

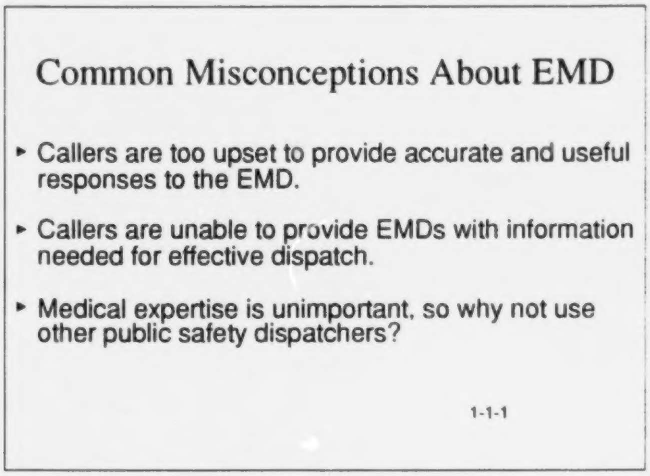
3. *The medical expertise required for effective emergency medical dispatch is not important, therefore public safety officials should use non-EMD dispatchers to dispatch resources.* One of your most important jobs is to give out medical instructions when told to do so by the EMDPRS.

   EMDs are advanced telecommunicators. You will receive specific emergency medical dispatch training and be taught to use your EMDPRS to decide which resources to dispatch.

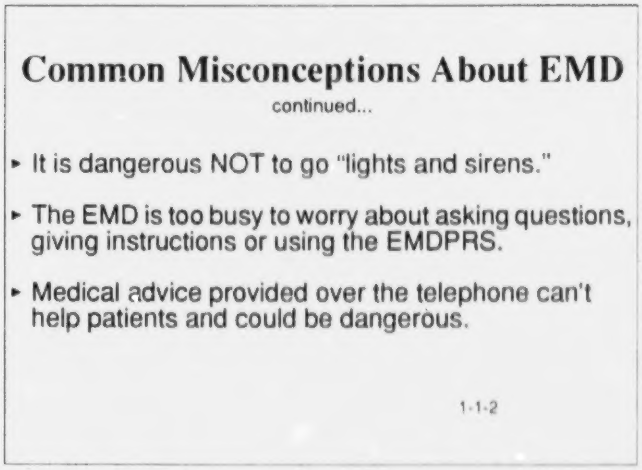
INSTRUCTOR NOTES

Discuss the most common EMD misconceptions.

Show Figure 1-1-1 while discussing the first three misconceptions.

TRAINEE TEXT	INSTRUCTOR NOTES
 Common Misconceptions About EMD ▸ Callers are too upset to provide accurate and useful responses to the EMD. ▸ Callers are unable to provide EMDs with information needed for effective dispatch. ▸ Medical expertise is unimportant, so why not use other public safety dispatchers? 1-1-1	**<TG PAGE 1-9>**
4. *All EMS calls must be answered "lights and sirens.* "In most cases, this is unnecessary. Most calls are not life-threatening. Use of an all-out response can be dangerous for both responders and bystanders. Refer to your locally approved EMDPRS for the appropriate responses available to you.	**Show** Figure 1-1-2 while discussing the last four misconceptions .
5. *The EMD is too busy dispatching to worry about asking all those questions, to provide instructions or use their protocol cards (EMDPRS).* This is your job! In this case, effectiveness is the key concern. You are trained to use the EMDPRS, which contains questions designed to get you the information you need for effective dispatch.	

TRAINEE TEXT	INSTRUCTOR NOTES
6. *Medical advice (provided over the phone) cannot help patients and could actually be dangerous.* You are trained to use the EMDPRS. The EMDPRS is approved by a local medical authority whose job it is to see that the EMDPRS your office uses is NOT going to hurt anyone.	
7. *Using the EMDPRS increases the amount of time and resources required to process a call.* Experience has shown that the time required to process a call increases very little in systems using the EMDPRS, when compared to systems that do not use them. In some cases, the response time even decreases.	**<TG PAGE 1-10>**



Common Misconceptions About EMD
continued...

- It is dangerous NOT to go "lights and sirens."
- The EMD is too busy to worry about asking questions, giving instructions or using the EMDPRS.
- Medical advice provided over the telephone can't help patients and could be dangerous.

1-1-2

These myths are common. This course gives information to help you dispel these myths. Remember, the purpose of this course is to give you the skills and knowledge required to do your job.

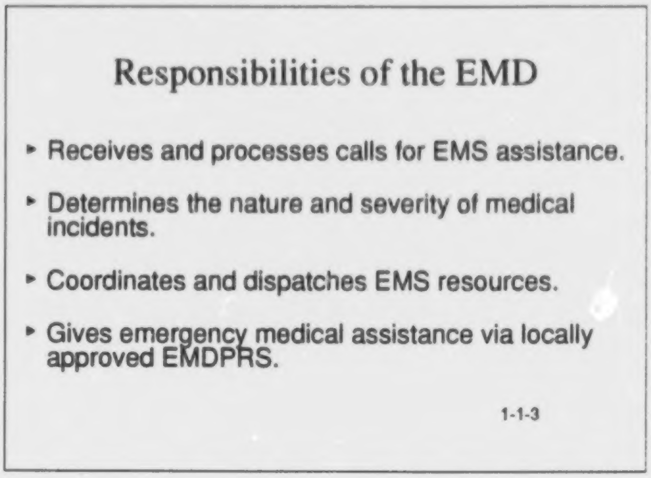
TRAINEE TEXT	INSTRUCTOR NOTES
QUESTION: *What are five of the most common myths about EMDs? Why are they wrong?*	**Ask** trainees to name at least five of the common myths regarding EMDs and why they are wrong. 1. Callers too upset... 2. Callers can't give proper information... 3. Medical expertise unimportant... 4. All calls must be answered "lights and sirens"... 5. EMD too busy to ask questions... 6. Medical advice over phone useless... 7. Using EMDPRS takes too much time...
Responsibilities of the EMD. As an emergency medical dispatcher, you play a vitally important role in the EMS system. Some of your responsibilities are obvious, others are not so obvious. Your responsibilities as an EMD are discussed in the following paragraphs. *An EMD serves to receive and process calls for Emergency Medical Service assistance.* Because of this, you must receive training in the use and handling of telecommunications equipment. This course does NOT provide that training.	**<TG PAGE 1-11>** **Discuss** EMD responsibilities. **Show** Figure 1-1-3 while discussing the first four EMD responsibilities.

TRAINEE TEXT	INSTRUCTOR NOTES

An EMD must determine the nature and severity of the medical incident type. You decide what is wrong, using the EMDPRS. It tells you what type of response you should make, including what types of units to send and what instructions you can give to callers.

An EMD is responsible for the coordination and dispatch of EMS resources. You coordinate and dispatch resources based on the pre-determined response configurations found in the local medically approved EMDPRS. You must know the availability of all resources in your system.

The EMD provides emergency medical assistance using the local medically approved EMDPRS. You may have to provide callers with emergency medical instructions. The EMDPRS will tell when you need to do this. Remember, most calls are not life threatening. The information you give will mostly be used to make the patient more comfortable and ensure their health and safety until dispatched medical personnel arrive.



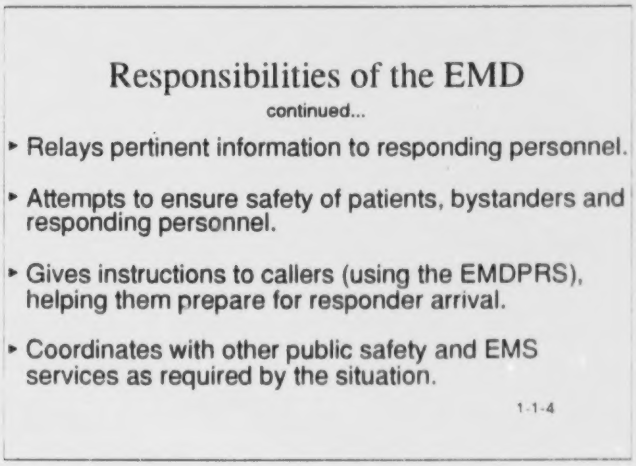
Responsibilities of the EMD

- Receives and processes calls for EMS assistance.
- Determines the nature and severity of medical incidents.
- Coordinates and dispatches EMS resources.
- Gives emergency medical assistance via locally approved EMDPRS.

1-1-3

<TG PAGE 1-12>

TRAINEE TEXT	INSTRUCTOR NOTES
An EMD relays pertinent information to responding personnel. Another responsibility of yours is to relay information about the patient to the responding unit(s). This usually includes information about the patient's location and current status.	**Show** Figure 1-1-4 while discussing the last four EMD responsibilities.
The EMD attempts to ensure the safety of the patient, bystanders and responders. You are required to attempt to ensure the safety of patients, bystanders and responders by warning them to remove patients from any immediate danger of further injury if possible. The EMDPRS tells you when to do this.	
An EMD provides instructions to callers that will help them prepare for the arrival of responders, based on the instruction of the EMDPRS. Your EMDPRS provides information that you can relay to callers prior to the arrival of dispatched personnel. This information makes the work of the responders easier. It includes things like locking up dogs and unlocking doors.	
The EMD coordinates with other public safety and emergency medical services as required by the situation. Based on the situation at hand, it may be necessary for you to contact other public services (like HAZMAT, Air Ambulance, etc.). Usually, air ambulance requests are issued to you by the responder at the scene. It is up to you to know and refer to your local procedures for contacting air ambulance services.	**<TG PAGE 1-13>**

TRAINEE TEXT	INSTRUCTOR NOTES
 Responsibilities of the EMD continued... ▸ Relays pertinent information to responding personnel. ▸ Attempts to ensure safety of patients, bystanders and responding personnel. ▸ Gives instructions to callers (using the EMDPRS), helping them prepare for responder arrival. ▸ Coordinates with other public safety and EMS services as required by the situation. 1-1-4	
QUESTION: *What are your responsibilities as an EMD?*	**<TG PAGE 1-14>** **Ask** trainees to identify EMD responsibilities listed here, plus probe them for any additional responsibilities that they might have at their agency.
Attributes/Behaviors of the Successful EMD. Knowing the responsibilities of an EMD is simply not enough to be successful at it. There are certain attributes and/or behaviors of EMDs that separate the successful EMD from the rest.	**Describe** the proper attributes and behaviors of the EMD.
The successful EMD is helpful and compassionate. Dispatchers who train to be EMDs do so for various reasons. Compassion for others and the desire to help them are two of the most important characteristics of a good EMD. EMDs show compassion for their callers and treat them with respect.	**Discuss** the most important characteristics of a good EMD.

TRAINEE TEXT	INSTRUCTOR NOTES
A successful EMD effectively handles the emotional stress involved in caller/patient crisis situations and clearly guides callers in these situations. Callers, patients and even you will likely be in high states of anxiety. It is up to you to calm them and yourself, gather information necessary for proper dispatch and provide callers with instructions (medical or "pre-arrival") that help in giving aid and comfort to the patient.	**Discuss** the importance of handling emotional stress.
The successful EMD masters the skills, philosophy and knowledge of Emergency Medical Dispatch. To be successful, you must learn and master the skills required for effective emergency medical dispatch. These skills can be taught through courses and practice.	**Discuss** these additional attributes and behaviors.
A successful EMD effectively gathers information from callers, prioritizes that information and consolidates that information in a useful format. It is essential that you be able to do all of this. Although most calls you will receive are not life-threatening (as stated earlier), there are instances where time is a critical factor in the survival of the patient. You should practice getting information in order to facilitate the dispatch process.	
A successful EMD assists other EMS personnel in reaching the patient's location. Without location information given by you, dispatched personnel could not find the patient.	**<TG PAGE 1-15>**
The successful EMD determines the nature of the medical emergency without diagnosing the medical problem or condition. Your job is to determine the medical emergency and dispatch personnel to deal with it.	

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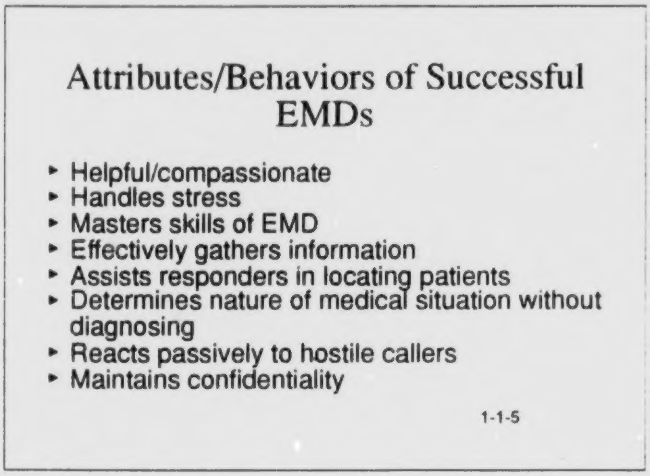
TRAINEE TEXT	INSTRUCTOR NOTES
Successful EMDs assist EMS personnel on the scene as requested by EMS personnel and avoid making patient care decisions by long distance. Once you have dispatched EMS personnel, you are to provide the pre-arrival and/or medical instructions to the caller as indicated by the EMDPRS. Once they arrive on the scene you are to assist responders by doing what they ask you to do.	
A successful EMD reacts passively to hostile callers, making no judgments based on the caller's demeanor or past experience with the caller. As an EMD, you are expected to dispatch based on the information you gather from a caller in response to the questions you ask (from the EMDPRS). Caller demeanor can be deceptive. What may sound like an inebriated caller (slurred speech, slow or "wandering" response to your questioning) could be a caller suffering a stroke or a diabetic with low blood sugar.	
A successful EMD maintains confidentiality. Under no circumstance are you allowed to give out information about a patient or caller. This includes knowledge of HIV infection. **Check with your local legal counsel about local HIV regulations. If you are provided with the information, ask the caller to inform the responding personnel upon their arrival at the scene.** If someone calls and requests information about a patient's status or name, you are only allowed to tell them where the ambulance is taking a patient.	**Tell** trainees to check local policy about HIV regulations.

TRAINEE TEXT



Attributes/Behaviors of Successful EMDs

- Helpful/compassionate
- Handles stress
- Masters skills of EMD
- Effectively gathers information
- Assists responders in locating patients
- Determines nature of medical situation without diagnosing
- Reacts passively to hostile callers
- Maintains confidentiality

1-1-5

QUESTION: *How would you describe a successful EMD? What characteristics should one have? What kinds of things would a successful EMD do or not do?*

Three Phases of the Dispatch Function. Knowing your basic responsibilities, and what it takes to be a successful EMD is not enough. As you may or may not know, there are three major phases of the dispatching function.

INSTRUCTOR NOTES

<TG PAGE 1-16>

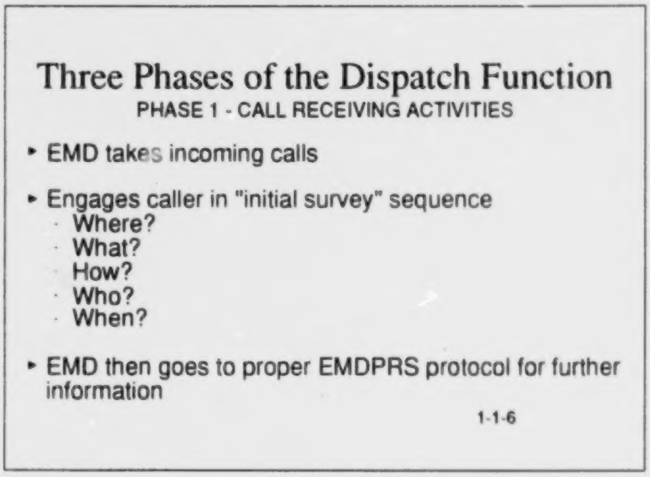
Ask employees to describe appropriate and inappropriate EMD behaviors based on the previous section on EMD attributes.

We suggest you devise some scenarios of good and bad behavior prior to the commencement of training. You will find some ideas and sample scenarios that may be helpful in Appendix B of this guide.

Discuss the three phases of dispatch.

TRAINEE TEXT	INSTRUCTOR NOTES

Phase 1 - Call Receiving Activities. In this phase, an EMD takes an incoming call and goes through an "all-caller interrogation" sequence. This sequence essentially allows the EMD to determine the location of the patient (**WHERE?**), the nature of the medical emergency (**WHAT?**), how it occurred (**HOW?**), to whom it occurred (**WHO?**) and when it occurred (**WHEN?**). Based on the information received, the EMD can immediately go to the proper protocol located in the EMDPRS and continue on to the next dispatch phase.



Three Phases of the Dispatch Function

PHASE 1 - CALL RECEIVING ACTIVITIES

- EMD takes incoming calls
- Engages caller in "initial survey" sequence
  - Where?
  - What?
  - How?
  - Who?
  - When?
- EMD then goes to proper EMDPRS protocol for further information

1-1-6

Phase 2 - Dispatch Activities. Questioning continues in this phase, and based on the information gathered during the call receiving phase, the EMD turns to the proper protocol. This protocol provides the proper response mode. Response modes are pre-determined by local medical authorities for the most effective response to the call type. The EMD dispatches EMS personnel to the scene in the proper, pre-determined mode and configuration.

<TG PAGE 1-17>

Show Figure 1-1-6.

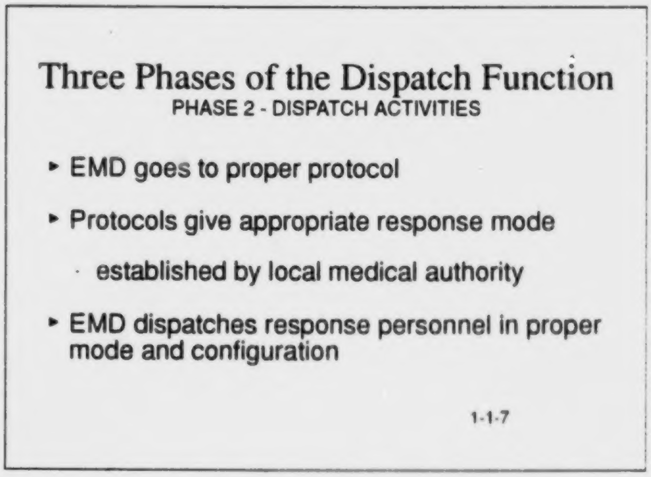
Describe the Call Receiving phase, including where, what, how, who and when.

Note to Instructor: This order is extremely important. "Where" must come first, regardless of whether the trainees will use ANI-ALI or E9-1-1 systems. You could cover this by referring to the "Where" component as "Verify the address of the caller and/or patient, and get a call-back number."

Show Figure 1-1-7.

Describe/discuss the Dispatch activities phase.

TRAINEE TEXT	INSTRUCTOR NOTES



Three Phases of the Dispatch Function
PHASE 2 - DISPATCH ACTIVITIES

- EMD goes to proper protocol
- Protocols give appropriate response mode
  - established by local medical authority
- EMD dispatches response personnel in proper mode and configuration

1-1-7

<TG PAGE 1-18>

Phase 3 - Post-Dispatch Activities. Once resources have been dispatched, the EMD engages in preparing the caller/patient for the arrival of responding EMS personnel. The EMD also updates the responding personnel with additional information as it is received. This could involve giving the caller pre-arrival instructions like unlocking doors, locking up dogs, turning on lights, gathering patient medications as indicated in the EMDPRS, etc. It may also involve the provision of medical instructions as indicated by the EMDPRS.

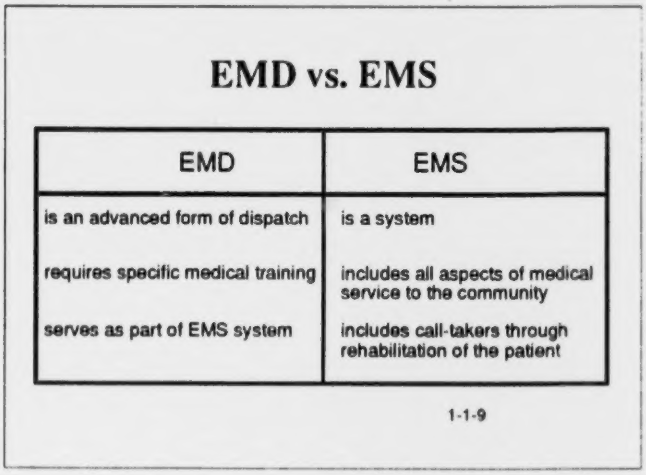
Show Figure 1-1-8.

Discuss Post-Dispatch activities.

TRAINEE TEXT	INSTRUCTOR NOTES
Three Phases of the Dispatch Function PHASE 3 - POST-DISPATCH ACTIVITIES ▸ EMD prepares caller for responding personnel ▸ EMD provides medical instructions as directed by the EMDPRS 1-1-8	**<TG PAGE 1-19>**
The Emergency Medical Service (EMS) System. Where does the EMD fit into the scheme of the EMS system? The answer to this question varies by locale. Your system may be very different than the EMD in the next county, city or suburb. In addition to the responsibilities you have already learned, there is one more: *It is the responsibility of the EMD to fully understand the EMS system in which s/he works.*	**Tell** trainees that they are ultimately responsible for understanding their EMS system. This is especially important if your trainees come from multiple agencies.
EMD vs EMS. What's the difference? *Emergency Medical Dispatch (EMD)* is an advanced form of dispatch telecommunications based on specific medical training. This training makes the EMD a member of the medical community, and therefore carries responsibilities in addition to those present in basic dispatch telecommunication. An EMD serves as a *part* of the local emergency medical service system.	**Show** Figure 1-1-9. **Describe** Emergency Medical Dispatch and Emergency Medical Service and the difference between the two.
Emergency Medical Service (EMS) includes all personnel of the local public safety system with specific, specialized medical training. An EMS system is defined as a coordinated arrangement of resources (including personnel, equipment and facilities) organized to respond to medical emergencies regardless of the cause. An EMS system covers the spectrum from prevention (changing behavior to prevent injuries from occurring)	**<TG PAGE 1-20>**

TRAINEE TEXT	INSTRUCTOR NOTES

through rehabilitation (returning individuals to productive lives after an injury producing incident has occurred). The EMS system is a complex arrangement of components including: statewide legislation; system management; human resources and training; communications; transportation; public information and education; facilities; trauma systems; medical direction and evaluation, all designed to serve the needs of the public in medical emergencies..



EMD vs. EMS

EMD	EMS
is an advanced form of dispatch	is a system
requires specific medical training	includes all aspects of medical service to the community
serves as part of EMS system	includes call-takers through rehabilitation of the patient

1-1-9

Resources commonly found in an EMS system. As indicated earlier, each EMS system is different. All members of the EMS system interact differently in one locale and may or may not even exist in another. In general, however, EMS systems contain the following resources:

<TG PAGE 1-21>

Describe these common resources of an EMS system.

TRAINEE TEXT	INSTRUCTOR NOTES

1. **Basic Life Support (BLS)/Advanced Life Support (ALS)**

   Generally, there are multiple types of responding resources available in many EMS systems. They are defined at the state or local level. These resources vary in the types of equipment carried, patient transport capability, treatments that can be provided and the training that the attending personnel have received. These include First Responders, BLS and ALS, defined on the following pages.

2. **Fire**

   Fire personnel often are part of the local EMS system because they have received specialized medical training. As such, they often are used as resources for emergency medical services.

3. **Police**

   Police officers are also part of many EMS systems. They may receive basic first aid training and also are frequently used to assist responding personnel in reaching patients and providing scene safety.

4. **Hospitals/Emergency Care Facilities**

   <TG PAGE 1-22>

   Hospital emergency departments and other emergency care facilities also are included in most EMS systems. Frequently these resources are contacted by the EMD at the request of EMS personnel at the scene. They may be contacted to get specific medical information that the responders might need.

TRAINEE TEXT	INSTRUCTOR NOTES
5. **Other** There are other resources available in many EMS systems. These include hazardous materials units (aka "HAZMAT"), Sexual Assault Centers, Hyperbaric Centers, Trauma Centers, Poison Control Centers, Burn Centers, Language Translator Services, etc.	
QUESTION: *Can you name resources commonly found in EMS systems? Think about EMS resources that are available in your EMS system. What are they?*	**Ask** trainees to name common EMS resources. Also, probe for any additional resources they might have. This is a good thing to do if your trainees are from multiple agencies.
Tiered EMS System Structures. There are as many EMS system structures as there are places that have EMS systems. These systems usually are broken down into layers or "tiers." Each tier has a different level of response based on local EMS system design. In general there are four tier types. *Not all systems have all of these tiers.*	**Describe** the typical EMS system tiers and be sure to tell trainees that not every EMS system is structured alike.
1. **Tier 1.** *First Responders* are used to provide immediate response to events that are determined to be highly urgent. The personnel are often trained in basic life support. Due to the availability and proximity of these units, they are able to provide quick response and early access to the patients while the ambulance is enroute to the scene. They are able to provide immediate treatment or stabilization of the patient.	**<TG PAGE 1-23>** **Briefly describe** Tier 1.

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TRAINEE TEXT	INSTRUCTOR NOTES
2. **Tier 2.** *Basic Life Support* (BLS) EMS units are usually transport ambulances staffed by emergency medical technicians (EMTs). These personnel have at least 110 hours of training in patient assessment and treatment of fractures, lacerations and other minor injuries. They are also CPR trained and are able to provide appropriate care to patients. EMTs provide treatment and transport for the sick and injured in cases where more advanced treatments and interventions are not required or available. They also may be used to assist more advanced level EMS responders.	**Briefly describe** Tier 2.
3. **Tier 3.** *Advanced Life Support* (ALS) units are usually staffed by paramedics who have at least 600 hours of coursework and advanced training in the care and treatment for the sick and injured. There are several levels of ALS. Currently paramedics are the highest level. All levels of advanced life-support function under medical control and have a physician medical advisor responsible for the medical content of the program. Other ALS levels include EMT-D (for Defibrillator) and EMT-I (for Intermediate). These individuals, while not as highly trained as paramedics, are trained in defibrillation, breathing support methods (like endotracheal intubation) and are also trained in establishing intravenous lines for delivery of fluids.	**Briefly describe** Tier 3.
ALS personnel trained to the paramedic level can perform all functions of basic life support personnel. They also have specialized training in advanced cardiac life support, EKG interpretation and are certified to establish intravenous lines, administer specific cardiac medication along with many other therapeutic medicines under the direction of medical control. They are trained in advanced airway maintenance techniques such as	**<TG PAGE 1-24>**

TRAINEE TEXT	INSTRUCTOR NOTES
endotrachial intubation and have additional training in anatomy and physiology.	
4. **Tier 4.** *Air Medical Services* Many EMS systems have air medical support available if needed. These are usually hospital based ALS helicopter services staffed by paramedics and nurses. These resources are used in the most severe cases where transport time to the hospital may be the determining factor in patient survival. They are also utilized in remote areas where EMS ground transport units have difficult access.	**Briefly describe** Tier 4.
Response Modes. As with tiers, response modes vary from place to place. *In general,* they fit into two categories; 1. *"Cold" responses;* no lights or sirens and no special emergency vehicle rules apply; responders are part of the normal traffic flow.	**Briefly describe** response modes. You may want to consider asking trainees to identify their response types, especially if they are from multiple agencies.
2. *"Hot" responses;* Emergency vehicle traffic laws apply; the responding vehicle uses its lights and sirens and may be permitted to exceed the legal speed limit in order to reach the patient in the quickest possible time.	**Review** local labels for these terms.
NOTE: Your agency may have different labels for these terms. If the instructor does not review these terms with you, feel free to ask him or her about them.	

TRAINEE TEXT	INSTRUCTOR NOTES
Summary	
This unit introduced you to the basic roles and responsibilities of EMDs. It also introduced you to basic structures (tiers), resources and responses found in most EMS systems. Finally, you were introduced to the structure, resources and responses used in your EMS system.	**<TG PAGE 1-25>** **Review** the unit and ask for (and answer) trainee questions.
In the next unit you will learn about the legal environment in which you work. **Unit 2, Legal and Liability Issues in Emergency Medical Dispatch** provides information about legal concepts that you should know.	

Common Misconceptions About EMD

- *Callers are too upset to provide accurate and useful responses to the EMD.*
- *Callers are unable to provide EMDs with information needed for effective dispatch.*
- *Medical expertise is unimportant, so why not use other public safety dispatchers?*

Common Misconceptions About EMD

continued...

- *It is dangerous NOT to go "lights and sirens."*
- *The EMD is too busy to worry about asking questions, giving instructions or using the EMDPRS.*
- *Medical advice provided over the telephone can't help patients and could be dangerous.*

Responsibilities of the EMD

- *Receives and processes calls for EMS assistance.*
- *Determines the nature and severity of medical incidents.*
- *Coordinates and dispatches EMS resources.*
- *Gives emergency medical assistance via locally approved EMDPRS.*

Responsibilities of the EMD

continued...

- *Relays pertinent information to responding personnel.*
- *Attempts to ensure safety of patients, bystanders and responding personnel.*
- *Gives instructions to callers (using the EMDPRS), helping them prepare for responder arrival.*
- *Coordinates with other public safety and EMS services as required by the situation.*

Attributes/Behaviors of Successful EMDs

- *Helpful/compassionate*
- *Handles stress*
- *Masters skills of EMD*
- *Effectively gathers information*
- *Assists responders in locating patients*
- *Determines nature of medical situation without diagnosing*
- *Reacts passively to hostile callers*
- *Maintains confidentiality*

Three Phases of the Dispatch Function

PHASE 1 - CALL RECEIVING ACTIVITIES

- *EMD takes incoming calls*
- *Engages caller in "initial survey" sequence*
  - *Where?*
  - *What?*
  - *How?*
  - *Who?*
  - *When?*
- *EMD then goes to proper EMDPRS protocol for further information*

Three Phases of the Dispatch Function

PHASE 2 - DISPATCH ACTIVITIES

- *EMD goes to proper protocol*
- *Protocols give appropriate response mode*
    - *established by local medical authority*
- *EMD dispatches response personnel in proper mode and configuration*

Three Phases of the Dispatch Function

PHASE 3 - POST-DISPATCH ACTIVITIES

- *EMD prepares caller for responding personnel*
- *EMD provides medical instructions as directed by the EMDPRS*

EMD vs. EMS

EMD	EMS
is an advanced form of dispatch	is a system
requires specific medical training	includes all aspects of medical service to the community
serves as part of EMS system	includes call-takers through rehabilitation of the patient

MODULE 1
Unit 2 Instructor Preparation

Following are a list of questions and/or topics which appear in Unit 2, for trainees to answer and discuss. Although information is provided in the Trainee Guide and Instructor Guide, you should be prepared to discuss these questions/topics and give additional information and examples, based on local agency guidelines and your experience.

1. Describe local immunity laws and issues. If your trainees are from multiple agencies be sure to discuss any differences in immunity laws and issues between the agencies.

2. Review local HIV policy as it relates to immunity laws and issues. Be sure you know the agency's policies on HIV, especially how the EMD can transmit knowledge of HIV status over the airwaves.

   Do not spend too much time on this topic. It is highly controversial and elicits a lot of emotion. Knowing the HIV policies of the agency will help relieve some of the EMD trainees' fears. If there is no policy, encourage trainees to ask their supervisor for a written policy on what they can or cannot say over the airwaves.

3. Discuss legal issues about dangerous EMD practices and behaviors which EMDs should be familiar with, and be prepared to give examples and clarification for each.

4. Discuss local agency methods for reducing liability risk and provide examples.

5. Analyze and discuss legal/liability issues that are present in the case studies included in the exercises for this unit. (You should review the case studies in this unit and develop case studies which are appropriate for your local agency.)

MODULE 1 - Unit 2
Legal and Liability Issues in Emergency Medical Dispatch

TRAINEE TEXT	INSTRUCTOR NOTES
UNIT OVERVIEW	
Emergency Medical Dispatchers work under difficult conditions. The stress associated with the job comes from the nature of the calls and concern over legal issues that can arise from doing your job.	**<TG PAGE 1-27>** **Introduce** the unit.
Unit 2, Legal and Liability Issues in Emergency Medical Dispatch gives you the legal information on your responsibilities and identifies areas of risk. You will be given some legal terminology with which you should become familiar. Then the unit gives you information on how to avoid legal problems.	
UNIT OBJECTIVES	
Unit Learning Objectives	
Upon completion of this unit, you will be able to:	**State** the unit learning objectives.
2. Identify legal and liability issues that the EMD faces.	
3. Identify strategies to avoid litigation.	
Enabling Learning Objectives	
To meet the unit learning objectives, you will:	
2.1 Define liability.	
2.2 Describe liability exemptions and dispatcher immunity.	
2.3 Describe negligence and how courts determine negligence.	

TRAINEE TEXT	INSTRUCTOR NOTES
2.4 Define standard of care.	
2.5 Describe abandonment.	
2.6 Describe the two types of consent.	
2.7 Explain and identify issues that surround confidentiality.	**<TG PAGE 1-28>**
3.1 Explain litigation and how to avoid it.	

TRAINEE TEXT	INSTRUCTOR NOTES

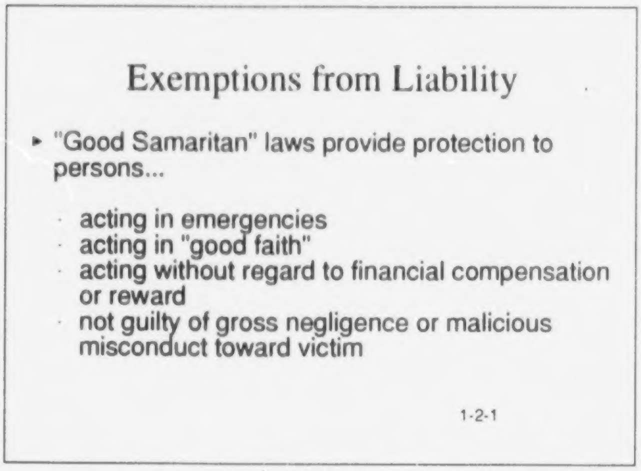
BASIC LEGAL CONCEPTS

As an EMD, you deal daily with life and death situations. The last thing you should have to deal with is legal issues.

In order for you to better learn the best ways to deal with legal concerns, you must learn about the most common legal concepts.

Liability

Definition. Liability means that you are ultimately responsible for your actions. Liability is related to negligence, because after negligence is proven in court, liability is assigned to an individual. You and/or your agency can be held liable for damages that may occur as a direct result of negligent actions, practices or conduct.



Exemptions from Liability

- "Good Samaritan" laws provide protection to persons...
  - acting in emergencies
  - acting in "good faith"
  - acting without regard to financial compensation or reward
  - not guilty of gross negligence or malicious misconduct toward victim

1-2-1

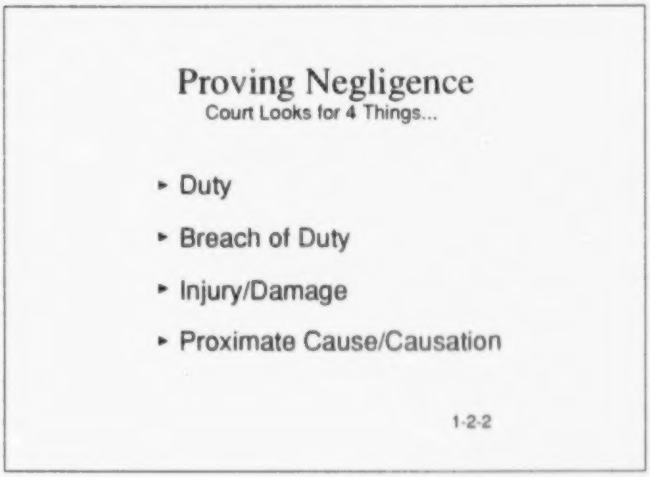
<TG PAGE 1-29>

Introduce the unit.

Show Figure 1-2-1.

Define and describe liability.

TRAINEE TEXT	INSTRUCTOR NOTES
Negligence	**<TG PAGE 1-30>** **Show** Figure 1-2-2.
Definition. Negligence is defined as "failure to act or perform in a particular situation as any other reasonable, prudent dispatcher (with the same or similar training) would under the same or similar circumstances."	**Define and describe** negligence.
In most cases the person who files a lawsuit ("plaintiff") is seeking compensation ("damages") for damage ("injury") that they allege occurred. Provided that you follow the locally approved EMDPRS and standards, the risk of negligence is significantly decreased.	
Proving Negligence. "Intent to Harm" is not required to prove negligence. The best way to understand negligence is to learn how it is determined in court. To prove negligence, the court must determine 4 things:	**Tell** trainees the four things the courts use to define negligence.
1) **Duty**. *Duty is the responsibility to act or perform according to established standards of care.* The court must show that some "duty to act" existed in the situation. The "duty relationship" begins when the EMD answers a call.	**Define** duty.
2) **Breach of Duty**. To prove negligence, the court must show that there was a breach of duty. That is, that you did not perform your duty (by acting according to the standard of care established by the community).	**Define** "breach of duty."
3) **Injury/Damage**. To prove negligence, the court must also prove that damage or injury was done to the patient. The type and amount of injury determines the amount of "damages" awarded to the victim.	**Define** Injury/Damage.

TRAINEE TEXT	INSTRUCTOR NOTES
4) **Proximate Cause/Causation**. The fourth criteria used to determine negligence is some determination of "causation." This means that the court has to show there is a direct relationship between the action taken by the EMD and the injury to the patient.	**<TG PAGE 1-31>** **Define** proximate cause/causation.
 Proving Negligence Court Looks for 4 Things... - Duty - Breach of Duty - Injury/Damage - Proximate Cause/Causation 1-2-2	
Two Types of Negligence. There are two types of negligence you will hear about, Simple and Gross. **Simple negligence** is defined as negligent conduct that was not purposeful or due to "malicious intent" (you didn't mean to do it). **Gross negligence** is defined as a negligent action that was undertaken with malicious intent (you meant to cause harm) and with willful disregard for the safety of persons and/or property.	**Show** Figure 1-2-3. **Describe**/define simple and gross negligence
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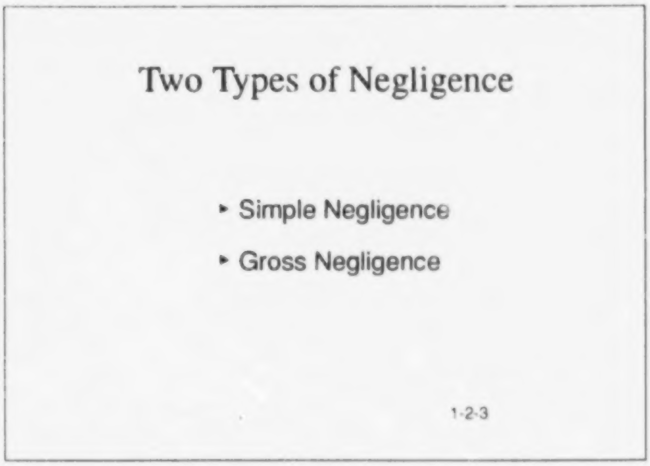
TRAINEE TEXT


Two Types of Negligence

- Simple Negligence
- Gross Negligence

1-2-3

Standard of Care

Defined. The standard of care for an area can be defined at any level of government; Local, State or Federal. Usually, the standard used in a court case is the standard used by the local community.

Establishing Standard of Care. The court generally uses four measures of conduct to determine the local "standard of care." These four measures are:

1) The EMD's behavior and conduct is judged in comparison to others with similar training and experience;

2) The EMD's behavior and conduct is judged in comparison to locally approved protocols and guidelines;

3) The EMD's behavior and conduct is judged in comparison to local or state statutes, local ordinances, case law or administrative orders that address the standard of care and

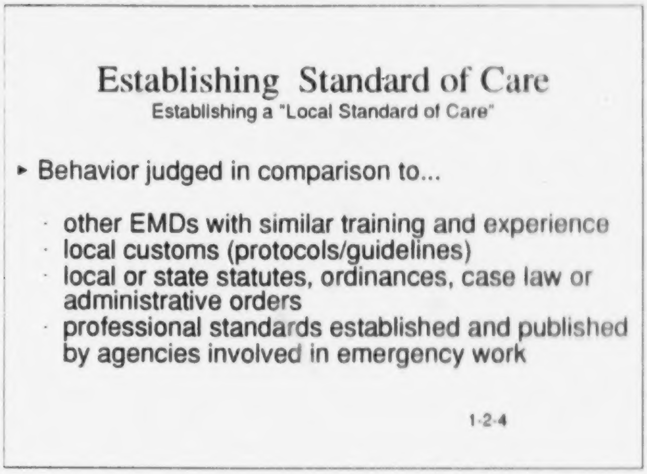
INSTRUCTOR NOTES

<TG PAGE 1-32>

Show Figure 1-2-4.

Define standard of care.

Describe what the court looks for to establish a standard of care.

TRAINEE TEXT	INSTRUCTOR NOTES
4) The EMD's behavior and conduct is judged in comparison to professional standards published by organizations involved in the development of emergency medical service standards such as the National Academy of Emergency Medical Service Physicians (NAEMSP) and the American Society for Testing and Materials (ASTM).	**<TG PAGE 1-33>**
 Establishing Standard of Care Establishing a "Local Standard of Care" ▸ Behavior judged in comparison to... · other EMDs with similar training and experience · local customs (protocols/guidelines) · local or state statutes, ordinances, case law or administrative orders · professional standards established and published by agencies involved in emergency work 1-2-4	
Other Legal Terms You Should Know	**Show** Figure 1-2-5
Abandonment. Simply put, abandonment is when you leave a patient who is known to be in a life-threatening condition. This includes **starting** treatment and then letting someone with less training take over resulting in being further injury or decline in the patient's condition.	**Describe** abandonment.
Principle of Reasonableness. This refers to what a "reasonable person" would do when faced with the same or similar situation.	**Describe** "principle of reasonableness."
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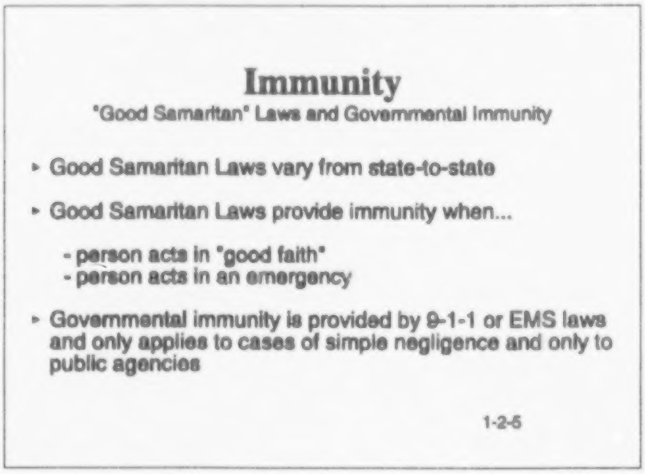
TRAINEE TEXT	INSTRUCTOR NOTES
	<TG PAGE 1-34>
Emergency Rule. The Emergency Rule states that "one who is faced with an emergency cannot be held to the same standard of conduct that he/she would otherwise be held to when not faced with such a situation." Simply put, when you face an emergency you can't be expected to act the same as you would if the emergency situation was not there. It is based on the "principle of reasonableness."	**Describe** the "emergency rule."
Foreseeability. "Foreseeability" refers to the fact that you must rely solely on the information you get from callers (you can't actually see what is happening at the scene). If on-scene findings (by the resources you dispatch) are different (more serious) than those reported by the caller then you are not liable, *provided you followed the local EMDPRS for the reported chief complaint type*. Like the Emergency Rule, it is also based on the "principle of reasonableness."	**Describe** "forseeability" and its relation to the EMDPRS.
Detrimental Reliance. A person expects that a certain action will be taken based on the fact that it has been reported in the media ("it was done before for other people"), public education or through simple reasonable expectation. If this action does not occur then the person can claim that they "relied" on the system to act in a certain way, and by doing so it ended up hurting them.	**Briefly** review detrimental reliance.
Damages. Anything awarded to winning plaintiffs. In negligence lawsuits, damages can be both "compensatory" and "punitive." *Compensatory damages* are those that involve repaying plaintiffs for money they have lost (lost wages due to lost workdays, hospital/medical bills, etc.). *Punitive damages* are those used to punish a defendant.	**Describe** damages both compensating and punitive.
Consent. Consent refers to permission to treat the sick or injured. You will usually hear about 2 types, Implied and Actual. *Implied Consent* refers to situations where if patients are unconscious and can't respond, it is safe for us to assume that they would want to be helped. *Actual Consent* is direct verbal or non-verbal communication to someone giving aid.	**Define** consent, both implied and actual.

TRAINEE TEXT	INSTRUCTOR NOTES
Immunity. Many states have "Good Samaritan" laws. *Ask your instructor about this.*	**<TG PAGE 1-35>** **Describe** local immunity laws and issues. This requires significant preparation prior to the commencement of training. This is even more important when your trainees are from multiple agencies.
NOTE: **Good Samaritan Laws do not apply to you while on the job.** There may be local or state laws that protect you, but the "Good Samaritan Laws" don't apply under any circumstance.	**Tell** trainees that "Good Samaritan" laws don't apply to them while they are on the job.
Governmental immunity is found in some cities and states. This immunity comes from 9-1-1 or EMS laws and usually applies only in cases of "simple negligence" where there was no "malicious intent." These laws do not apply to EMDs in private agencies.	**Describe** governmental immunity.
 **Immunity** "Good Samaritan" Laws and Governmental Immunity ▸ Good Samaritan Laws vary from state-to-state ▸ Good Samaritan Laws provide immunity when... - person acts in "good faith" - person acts in an emergency ▸ Governmental immunity is provided by 9-1-1 or EMS laws and only applies to cases of simple negligence and only to public agencies 1-2-5	

TRAINEE TEXT

Patient Confidentiality

Issues in confidentiality. You are expected to maintain confidentiality. Patients have the right to expect that any information they give you will be kept confidential. In terms of confidentiality, you:

1) can't relate information about patient names;
2) can't talk about what ***the patient*** said;
3) can't talk about unusual behaviors that are not related to the medical condition unless danger exists (to responders) and
4) can't talk about aspects of a patient's lifestyle.

Only information that is relevant to determine the proper medical response, related to scene safety, patient complaint and condition can be relayed.

NOTE: Be sure to ask your instructor about local HIV policies.

INSTRUCTOR NOTES

<TG PAGE 1-36>

Tell trainees about confidentiality issues and relate to this what they can or can't do.

Discuss HIV with trainees. The Department of Justice says that revealing information about a patient's HIV status cannot result in that patient receiving less than appropriate care as per protocols (like delayed arrivals, refusal to treat, etc.). Check local policies on HIV information transmission via the airwaves and discuss them with the trainees.

TRAINEE TEXT

Inappropriate Concerns and Misconceptions

More misconceptions and concerns. Some misconceptions that are common to EMD were addressed in Unit 1. In addition to those are the following. These concerns and misconceptions are those that EMDs and the public have. Throughout your training you will see why they are wrong:

1) *EMDs should be certified as CPR instructors.* ASTM standards do not require that EMDs be certified as CPR instructors. Because you work in an environment where you are unable to see the patient for yourself (a " blind environment"), CPR certification is not as vital as being able to tell a caller how to do it via telephone instructions using the approved EMDPRS protocols.

2) *EMDs should have advanced medical knowledge.* Because the EMD is operating in a blind environment, having actual "hands-on" advanced medical knowledge is not required. The basic medical concepts presented in this NHTSA curriculum provide sufficient medical knowledge for the EMD to operate effectively.

3) *EMDs should relay confidential information to responding personnel.* The EMD should NEVER relay confidential information to responders, including HIV status. The potential for lawsuits is enormous. Confidentiality laws exist to protect citizens.

4) *EMDs should fear being sued for giving medical instructions.* As long as you are following the procedures outlined by your agency and using the scripts presented in your locally approved EMDPRS, you are okay. The medical information you are presented with during your training (and found in your EMDPRS) are designed to help, not hurt, patients.

INSTRUCTOR NOTES

Describe the additional misconceptions presented here.

<TG PAGE 1-37>

State these misconceptions and tell trainees why they are wrong.

TRAINEE TEXT

5) *EMDs should fear telling callers that an ambulance is "on the way."* This is obviously wrong. One fear that callers have is that help isn't coming. Telling a caller that an ambulance is "on the way", *once one has been dispatched,* helps callers relax a little, making it easier for you to enlist their help in providing medical assistance to the patient.

Appropriate Concerns and Dangerous Practices/Behaviors

What to be concerned about. The following are dangerous EMD practices and behaviors with which you should be familiar:

1) *failing to send emergency medical services when requested;*
2) *subjective judgment of caller credibility;*
3) *subjective judgment of the validity of caller's chief complaint;*
4) *argumentative/combative attitude on the part of the EMD;*
5) *allowing prejudices to affect objective decision making;*
6) *giving medical instruction without using locally approved EMDPRS;*
7) *failure to train and be certified as an EMD and*
8) *not giving instructions when they are needed and you have a protocol for it.*

INSTRUCTOR NOTES

<TG PAGE 1-38>

Show Figure 1-2-6.

Tell trainees that these are legal issues they should be concerned about. Provide examples and clarification for each if possible.

TRAINEE TEXT

Appropriate Concerns

- failure to send resources when requested
- subjective judgment of caller credibility
- subjective judgment of chief complaint
- argumentative or combative EMD behavior
- allowing prejudices to influence decisions
- giving medical instructions without using EMDPRS
- failure to train/be certified as EMD
- not giving instructions when needed and protocol is available

1-2-6

Avoiding/Reducing Liability (Risk Management)

Avoiding Liability. In an effort to avoid liability, it must be approached at two levels - agency and individual. Remember, avoiding liability means being able to avoid being found liable in a court of law.

Agency Methods. Agencies can use the following methods in an effort to avoid liability. Look for these types of policies/procedures in your agency:

1) Existence of well-defined screening/hiring procedures, used in an effort to select the best candidates for EMD.

2) Use of a well-organized, written orientation and training program for new employees.

3) Regular and objective progress reports given to probationary personnel.

4) Clearly defined job expectations and work descriptions.

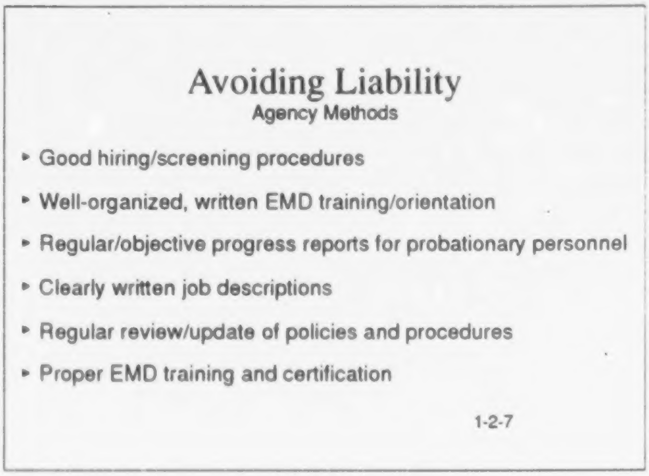
INSTRUCTOR NOTES

<TG PAGE 1-39>

Discuss avoiding liability.

Show Figure 1-2-7.

Discuss the first six agency methods for reducing liability risk and provide examples if you have them.

TRAINEE TEXT	INSTRUCTOR NOTES
5) Regularly reviewed and updated policies and procedures.	**<TG PAGE 1-40>**
6) Proper EMD training and certification provided.	
 Avoiding Liability Agency Methods ▸ Good hiring/screening procedures ▸ Well-organized, written EMD training/orientation ▸ Regular/objective progress reports for probationary personnel ▸ Clearly written job descriptions ▸ Regular review/update of policies and procedures ▸ Proper EMD training and certification 1-2-7	**Show** Figure 1-2-8.
7) Appropriate implementation of an EMD program.	**Discuss/describe** the final six methods agencies can use to reduce liability.
8) A well-managed EMD program.	
9) Existence of a formal relationship with a physician who gives medical direction to the EMD program.	
10) A quality assurance/quality improvement (QA/QI) program implemented for dispatch.	
11) Existence of an on-going, regular continuing education program.	
12) Budgets that allow for QA/QI improvements (including updating training materials and providing personnel and overtime required to carry out these functions).	**<TG PAGE 1-41>**

TRAINEE TEXT

Avoiding Liability

Agency Methods Continued...

- Appropriate implementation of EMD program
- Adequate EMD program management
- Provide physician who gives medical direction to program
- Implement QA/QI program for dispatch
- Implement on-going, regular continuing dispatch education program (CDE)
- Develop budgets that allow for improvements to be made

1-2-8

Individual Methods. In addition to the methods described above, there are ways that you (as an individual) can avoid liability. These methods are described below.

1) Avoid inappropriate behaviors that have been described in this unit and in Unit 1.

2) Actively participate in QA/QI and continuing education programs.

3) Seek and obtain certification as an EMD.

4) Follow the EMDPRS and the policies, procedures and practices established by your agency and the local community.

5) Strictly adhere to the protocols and training of the EMDPRS.

6) Report any problems or problematic situations as soon as possible and in writing.

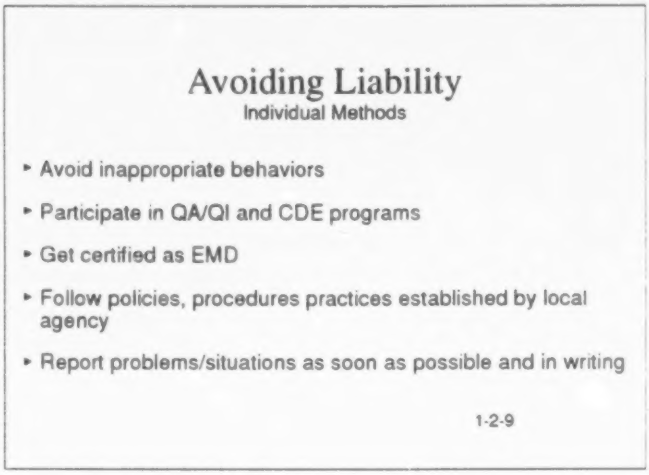
INSTRUCTOR NOTES

Show Figure 1-2-9.

Discuss these six methods individuals can use to reduce the risk of liability.

<TG PAGE 1-42>

TRAINEE TEXT	INSTRUCTOR NOTES



Avoiding Liability
Individual Methods

- Avoid inappropriate behaviors
- Participate in QA/QI and CDE programs
- Get certified as EMD
- Follow policies, procedures practices established by local agency
- Report problems/situations as soon as possible and in writing

1-2-9

Summary

This unit has provided you with information about the legal aspects of your job. The purpose of the unit was to provide you with information that would make you comfortable doing your job without undue concern about lawsuits.

Review the unit and ask for (and answer) trainee questions.

You have learned some basic legal concepts that impact your job. This unit also gave you information on the two-pronged approach to avoiding liability through agency and individual methods. Information about additional misconceptions that people have about EMDs and legitimate concerns that you should have were also presented.

Conduct Team Analyses (see IG NOTE #1 page 1-47 for instructions. Select or design scenarios like those found in Appendix B. The scenarios in Appendix B are examples for you to follow when designing those you will use in your course.

The next unit prepares you for EMD by introducing you to some medical concepts that you will have to deal with on a daily basis. These terms and concepts must become familiar to you.

TEAM ANALYSES

Materials:

4 case studies
Chart paper
Easel
Colored markers

Approximate time to complete:

45 minutes

Note to the Instructor:

On the following pages of this IG NOTE (IG Note #1) you will find two sample scenarios. These scenarios are provided as examples of how you may want to design your scenarios for use in class. They are by no means definitive, and you are free to develop scenarios as you want. You may even decide (if money and time are available) to create a video or audiotape of a call for use here. The possibilities are endless.

The only requirements for your scenarios are:

1. a complete text/script of a request for EMS services;
2. a copy for the trainees to read and
3. at least four scenarios.

As you develop your scenarios, consider creating a list of topics for the trainees to review. you may even decide to include these topics at the end of the trainee copies to help them focus on the relevant issues. Your copy should at least have a list of things you want the trainees to discuss.

MODULE 1 - IG NOTE #1
Basic Emergency Medical Dispatch Concepts

Instructions:

The following instructions relate to the Unit 2, Team Analyses as mentioned on page 1-34 of the instructor guide.

1. Divide the class into 4 teams (as evenly as possible).

2. Pass out the cases to the trainees. There are 4 case studies.

3. Tell trainees to read each case study (10 minutes to read them all). Assign each team 1 case study to read and discuss.

4. Tell each team to read the scenario that they are assigned and to discuss the legal and liability issues (if any) that are present.

5. Tell teams that they have 20 minutes to read the scenario and prepare team answers that:

   a) identify the legal/liability issues that are present;
   b) Identify how to solve the problem and
   c) identify methods to prevent this from happening again (risk management techniques that will help prevent this in the future).

6. After 20 minutes pass, call time.

7. Each team now gets 5 minutes to present its findings to the rest of the class and respond to questions presented by the other teams.

8. After each team has presented its findings, tell the class what really happened with the case, including if it went to court, how it was adjudicated and ways to identify the issues that could be prevented.

Sample scenarios are presented on the following pages.

Sample Scenario #1

BACKGROUND	The following calls were received from an area of town having many college student housing complexes. Several call were placed for this incident in a short time span.
Time of year:	March
Day of week:	Sunday
Time of day:	01:00 a.m.

First call for the first incident:

SCRIPT

EMD:	Paramedics
Reporting Party One:	Yea, we have someone here hyperventilating and we don't know what to do with her. ***(RP one has very slurred speech.)***
EMD:	What's the address there?
Reporting Party One:	6545.....
EMD:	Yes
Reporting Party One:	...we don't want an ambulance, we just need to know how to treat it.
EMD:	Ok, well what you need to do is call an emergency room if you're just looking for treatment. All I can do is send you an ambulance sir.
Reporting Party One:	Ok......

continued...

EMD: What is she doing?

Reporting Party One: ....were not paying for an ambulance.

EMD: Well, what is she doing right now?

Reporting Party One: She's hyperventilating.

EMD: Why?

Reporting Party One: I don't know why.

EMD: Can I speak with her?

Reporting Party One: Sure.

Reporting Party Two: Excuse me, ma'am. ***(RP two also has slurred speech.)***

EMD: Yes.

Reporting Party Two: Ok, we have a person that's... ah... hyperventilating and but yet she has been drinking a lot and mass quantities. She fell and hit her head, possible concussion.

EMD: Ok.

Reporting Party Two: But...

EMD: So she's having difficulty breathing?

Reporting Party Two: She will not...she will not stop breathing hard and it's like when you're ah..

EMD: How old is she?

Reporting Party Two: bent over and you're cramping.

continued...

EMD: How old is she, sir?

Reporting Party Two: She's twentyyyyyyyy two........and I don't know how to treat her. I've had CPR but I've never had this.

EMD: Ok, she doesn't need CPR is she's breathing.

Reporting Party Two: Yea, but she's...

EMD: Is she conscious?

Reporting Party Two: Yea, well ah barely.... would it be better is she wasn't?

EMD: No, not at all, what's your address there?

Reporting Party Two: Ah....Gail what's your address? I just...we're visiting so.... I just need the treatment.

EMD: Yes, I need your address, sir, she needs medical attention.

Reporting Party One: Hay listen, I've been through butting you medical people before....

EMD: Sir, she needs medical attention.

Reporting Party One: Well apparently so but I've been screwed by it before and I'm not willing to pay that unless it's a life threatening thing. She really does need help right now.

EMD: Sir, you'll be getting help, I just need you to verify you address.

Reporting Party One: It's 6545 Montazuma Road.

EMD: Apartment number what?

continued...

MODULE 1 - IG NOTE #1

Basic Emergency Medical Dispatch Concepts

Reporting Party One: Seventeen........

EMD: Ok.

Reporting Party One: .....but I'm not going to pay for this s_ _ t is you're going to screw me around again.

EMD: Ok, the girl needs help, ok?

Reporting Party One: Well I know she does.

EMD: All right, we're going to get help out there for her. Right now I want you to encourage her to slow her breathing down.

Reporting Party One: Well we're trying.

EMD: All right and we'll be out there in a couple of minutes.

Reporting Party One: Ok.

EMD: All right, good bye.

INCIDENT #2:

This was a second call from the same area of town and was received less than 5 seconds after the first call ended.

First call for the second incident:

SCRIPT

EMD:	Paramedics.
Police Dept. Dispatcher:	This is P.D. with a transfer for medical aid.
Reporting Party	We need an ambulance at 5739 Montazuma Road.
EMD:	Ok, what's the medical problem there?
Reporting Party:	I guess somebody punched this guy and he's out on the ground and he's bleeding like crazy and that's all I know.
EMD:	Where's he bleeding from?
Reporting Party:	I guess from the mouth and nose.
EMD:	Is he conscious?
Reporting Party:	No he's out right now and everyone is around him. We just need someone over here right now.
EMD:	Are you inside or out on the street?
Reporting Party:	He's out on the sidewalk.
EMD:	So you really don't know what happened to him?

continued...

Reporting Party:	No, we just heard all these people run out there and when we looked he was on the ground.
EMD:	Ok, we'll have someone out there in just a few minutes...stay on the line for the Police Department.

Second call for the second incident:

SCRIPT

EMD:	Paramedics
CHP Dispatcher:	Hi CHP (California Highway Patrol) we have a cellar call reporting a person down on Montazuma Avenue.
EMD:	Ok, that's the fifty seven-hundred block?
Reporting Party:	Ah, yes...someone's passed out.
EMD:	Ok, we're already responding to that ma'am.
Reporting Party:	It's Campanile and Montazuma at the Campanile Apartments.
EMD:	Yes.
Reporting Party:	It's right in front of the Campanile Apartments, I just said I had a cellar phone and I'd call 9-1-1.
EMD:	Ok, we're already on the way to that.
Reporting Party:	Ok, thanks.

Second call for the first incident (the hyperventilating, twenty-two year old female):

SCRIPT

EMD:	Paramedics
Police Dept. Dispatcher:	Yea, P.D. here... this person hung up. Apparently this was a medical emergency. Do you want me to give you a call back?
EMD:	No, I don't need it. It's on my ANL/ALI and we're already responding to this.
Police Dept. Dispatcher:	I beg your pardon.
EMD:	We're already responding to this, 6545 Montazuma?
Police Dept. Dispatcher:	Right, a male said that he needed an ambulance.
EMD:	Right and he hung up on you?
Police Dept. Dispatcher:	Yes.
EMD:	Well he called us a little bit ago and we're already on the way.
Police Dept. Dispatcher:	Yea, something about hyperventilating.
EMD:	Right.
Police Dept. Dispatcher:	Ok.
EMD:	Thanks, bye bye.

MODULE 1 - IG NOTE #1
Basic Emergency Medical Dispatch Concepts

Third call was for the first incident:

SCRIPT

EMD:	Paramedics
Reporting Party:	Ah, yes I need an ambulance. I have ah ah girl here...age...what age is she? Twenty-one, she drank an excessive amount of alcohol and she's going into convulsions right now. She's thrown up as much as she possibly can and she's dry heaving. We don't know what to do.
EMD:	What's your address?
Reporting Party:	It's 6545 Montazuma Road, this is in the college area.
EMD:	Ok, exactly what is she doing right now?
Reporting Party:	Ah.....
EMD:	Ok, someone called five minutes ago and we started an ambulance five minutes ago.
Reporting Party:	...and then he tried to cancel it and now I'm calling back. I'm here....
EMD:	We haven't canceled it, we're still on the way.
Reporting Party:	Ok.
EMD:	Now what is she doing?
Reporting Party:	Ah...right now we got her into ah...I just came home and she was in front of the apartment complex and she was dry heaving. I guess she had thrown up as much as possible alcohol liquid as she had in her system.

continued...

EMD:	So what are you talking about when you say a convulsion?
Reporting Party:	Ah, she's on the couch right now and she's shaking uncontrollably. We have a blanket over her... and a wash cloth on her face. We gave her water..her response...she is responding to us but ah it's not...it seems to be the longer she's sitting on the couch the less is the response we're getting from her.
EMD:	Ok, they're outside right now and all you need to do is let them in.
Reporting Party:	Ok, thanks.

INSTRUCTOR NOTES

The above scenario was taken from an actual case history and was chosen for it's learning value. This scenario is an illustration of the many different pitfalls an Emergency Medical Dispatcher (EMD) will encounter. You may use all or part of the scenario in your presentation depending on the legal points you want to cover. The following are key points to consider:

Standard of care: Always follow your Emergency Medical Dispatch Protocol Reference System (EMDPRS).

Duty relationship: Don't forget that the duty relationship begins when the EMD answers the phone.

Duty to act: Don't let the RP's lack of medical knowledge sway your judgment or distract you from your ***duty to act.***

continued...

MODULE 1 - IG NOTE #1

Basic Emergency Medical Dispatch Concepts

Abandonment: Don't let the involvement of alcohol/drugs or the obvious impairment of the reporting party (RP) diminish the importance of the request for medical aid.

Consent: The level of consciousness and condition of the twenty-two-year-old female in the above scenario is not clear. Based on the information supplied by the reporting parties the patient was an adult. Therefore, if the patient was unconscious, ***implied consent*** is assumed. If the patient was conscious and oriented she could have given her ***actual consent*** for medical treatment. In the first scenario the dispatcher never talked to the patient so it was correctly assumed that a condition of ***implied consent*** existed. The second scenario is an example of a clear-cut situation where ***implied consent*** is indicated because the patient was reported to be unconscious.

Breach of duty: When many calls are received for the same area, freeway, street complex etc. the EMD must verify the exact location of each incident. The EMD must dispatch the most appropriate response level to each incident. It is not unusual to have multiple incidents or patients in close proximity that are not related. When in doubt, always dispatch to all additional request for medical aid.

Sample Scenario #2

BACKGROUND: This call was received at 2:00 p.m. from an area of town having a high frequency of violent crimes. The Reporting Party was the patient and the victim. The patient's speech is slow but strong and deliberate. He sounds as though he might be splinting and is experiencing some pain. His voice does not suggest any shortness of breath or difficulty breathing.

SCRIPT

EMD	Paramedics, operator 18.
Reporting Party:	Yes ma'am, I'm in real bad shape. I just got out of Detox and I got robbed too.
EMD:	Ok sir, were you injured when you were robbed?
Reporting Party:	Yes ma'am, a little bit but not that much.
EMD:	Ok, do you want to go to the hospital?
Reporting Party:	Yes ma'am, University Hospital.
EMD:	Sir, are you injured?
Reporting Party:	Yes.
EMD:	What part of your body is injured?
Reporting Party:	They stomped me real bad..my lungs.
EMD:	Sir, what part of your body was injured?
Reporting Party:	My left side.

continued...

EMD: Your left side?

Reporting Party: Yes ma'am.

EMD: What do you mean your left side....like you stomach?

Reporting Party: No ma'am, my lung.

EMD: Your lungs?

Reporting Party: Yes.

EMD: Were you hit in the chest?

Reporting Party: I don't know hon. I dis....

EMD: Where did the people go that robbed you?

Reporting Party: I don't know that either.

EMD: Are they still in the area....do you see them?

Reporting Party: Yea they're around here somewhere.

EMD: Do you see them?

Reporting Party: Yes ma'am.

EMD: You do see them. Ok, why don't you stay on the line with the police and I'll get somebody on the way?

Reporting Party: Ok.

Radio Dispatcher: Medic 28 respond to Eleventh and Market for an assault victim with a chest injury. Stand back for Police Department to clear the scene, the assailants are still in the area, Police Department is responding.

MODULE 1 - IG NOTE #1

Basic Emergency Medical Dispatch Concepts

INSTRUCTOR NOTES

This scenario should evoke several topics for discussion.

Should they tell the responding units to ***"stand back?"***

What is the Dispatcher's responsibility to the responding units?

What is the Dispatcher's responsibility to the patient?

Will a delay in care cause a worsening of the patients condition?

Exemptions from Liability

- *"Good Samaritan" laws provide protection to persons...*
    - *acting in emergencies*
    - *acting in "good faith"*
    - *acting without regard to financial compensation or reward*
    - *not guilty of gross negligence or malicious misconduct toward victim*

Proving Negligence

Court Looks for 4 Things...

- *Duty*
- *Breach of Duty*
- *Injury/Damage*
- *Proximate Cause/Causation*

Two Types of Negligence

- *Simple Negligence*
- *Gross Negligence*

Establishing Standard of Care

Establishing a "Local Standard of Care"

- *Behavior judged in comparison to...*
  - *other EMDs with similar training and experience*
  - *local customs (protocols/guidelines)*
  - *local or state statutes, ordinances, case law or administrative orders*
  - *professional standards established and published by agencies involved in emergency work*

Immunity

"Good Samaritan" Laws and Governmental Immunity

- ***Good Samaritan Laws vary from state-to-state***
- ***Good Samaritan Laws provide immunity when...***
    - *person acts in "good faith"*
    - *person acts in an emergency*
- ***Governmental immunity is provided by 9-1-1 or EMS laws and only applies to cases of simple negligence and only to public agencies***

Appropriate Concerns

- *failure to send resources when requested*
- *subjective judgment of caller credibility*
- *subjective judgment of chief complaint*
- *argumentative or combative EMD behavior*
- *allowing prejudices to influence decisions*
- *giving medical instructions without using EMDPRS*
- *failure to train/be certified as EMD*
- *not giving instructions when needed and protocol is available*

Avoiding Liability

Agency Methods

- *Good hiring/screening procedures*
- *Well-organized, written EMD training/orientation*
- *Regular/objective progress reports for probationary personnel*
- *Clearly written job descriptions*
- *Regular review/update of policies and procedures*
- *Proper EMD training and certification*

Avoiding Liability

Agency Methods Continued...

- *Appropriate implementation of EMD program*
- *Adequate EMD program management*
- *Provide physician who gives medical direction to program*
- *Implement QA/QI program for dispatch*
- *Implement on-going, regular continuing dispatch education program (CDE)*
- *Develop budgets that allow for improvements to be made*

Avoiding Liability

Individual Methods

- *Avoid inappropriate behaviors*
- *Participate in QA/QI and CDE programs*
- *Get certified as EMD*
- *Follow policies, procedures practices established by local agency*
- *Report problems/situations as soon as possible and in writing*

MODULE 1
Unit 3 Instructor Preparation

Following are a list of questions and/or topics which appear in Unit 3, for trainees to answer and discuss. Although information is provided in the Trainee Guide and Instructor Guide, you should be prepared to discuss these questions/topics and give additional information and examples, based on local agency guidelines and your experience. Additional supporting graphics should be used to illustrate medical concepts. Keep them simple, though, because you are not teaching an advanced anatomy or biology class.

1. Can you describe the levels of consciousness? How do you determine each level of consciousness? (Be prepared to give sample descriptions that are based on real-life scenarios.)

2. What is shock? What are its signs and symptoms? Can you name 5 types of shock? How would you tell a caller to deal with shock?

3. Can you describe respiratory distress? What are the major signs and symptoms of true respiratory distress? How is it different from breathing difficulty?

NOTE: This unit can be combined with Module 3. If you (or the advisory committee) choose to do so, be sure that you tell the trainees you are going to do this and make sure their text, your text, and all graphics coordinate properly.

TRAINEE TEXT

UNIT OVERVIEW

As an EMD, you respond to many medical/traumatic emergencies as a regular part of the job. Therefore, it is very important that you know some basic medical information that will assist you in determining the nature and needs of medical emergencies. This information will also make it easier for you to communicate with various people within the EMS system.

Unit 3, Introduction to Emergency Medical Concepts provides you with that basic medical knowledge. You will learn about the seven systems of the body, as well as learn what *really* kills patients. Also included in this unit is basic information regarding shock, bleeding, respiratory distress and a glossary of common medical terms that you will hear at your job.

UNIT OBJECTIVES

Unit Learning Objective

Upon completion of this unit, you will be able to:

4. Describe medical concepts as they relate to the EMD function.

Enabling Learning Objectives

To meet the unit learning objective, you will:

4.1 Describe the seven systems of the body.

4.2 Describe what really kills a patient.

4.3 Define shock.

INSTRUCTOR NOTES

<TG PAGE 1-43>

Introduce the unit.

State the unit learning objective(s).

4.4 Describe methods for dealing with bleeding patients and patients in shock.

4.5 Describe the levels of consciousness and how to determine them.

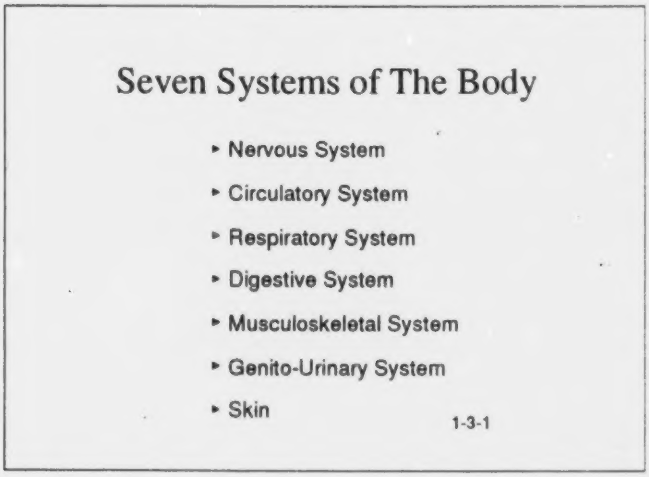
TRAINEE TEXT

SYSTEMS OF THE BODY

The human body is a complex organism. To lessen this complexity, it helps to think of it in terms of having seven major systems. Each system has a specific function and, in ***most*** cases, operates using an entirely different set of organs than the other systems. These systems are explained below.

Seven Systems of The Body

Each system has its own job and special functions that make it different from the other systems. You will learn about the Nervous System, Circulatory System, Respiratory System, Digestive System, Musculoskeletal System, Genito-Urinary System and Skin. Each of these systems is described below.



Seven Systems of The Body

- Nervous System
- Circulatory System
- Respiratory System
- Digestive System
- Musculoskeletal System
- Genito-Urinary System
- Skin

1-3-1

INSTRUCTOR NOTES

<TG PAGE 1-45>

Show Figure 1-3-1.

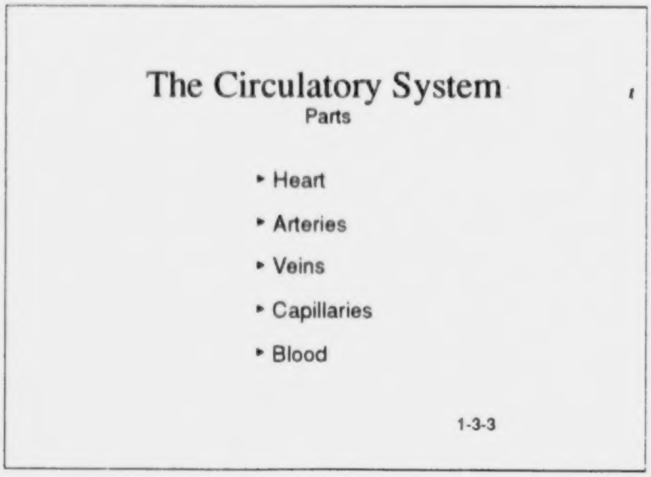
List the seven systems of the body: Nervous, Circulatory, Respiratory, Digestive, Musculoskeletal, Genito-Urinary and Skin.

TRAINEE TEXT	INSTRUCTOR NOTES
System 1: The Nervous System. The nervous system is that part of your body that controls all of your body functions and allows for interaction with the outside world through sensation. This system is made up of the brain, spine, spinal column and all of your nerves.	**<TG PAGE 1-46>** **Show** Figure 1-3-2. **Discuss** the Nervous system.
The nervous system is made of three smaller subsystems; the *Central Nervous System*, the *Peripheral Nervous System* and the *Autonomic Nervous System*. Each of these systems is described below.	**List** the three subsystems of the Nervous system.
1) The *Central Nervous System* is made up of the brain and the spinal cord.	**Name** the parts of the central nervous system.
a) *The Brain.* The brain is the control center of the body. Nothing in the body happens without first being told to do so by the brain. It receives input from the nerves that are placed throughout your body and directs all of your body functions. The brain is also responsible for reason and thought.	**Briefly discuss** the brain.
b) *The Spinal Cord.* The spinal cord acts as an electric cable throughout your body. It is responsible for carrying messages from all parts of your body to the brain. It also carries messages from the brain to the parts of your body.	**Briefly discuss** the spinal cord.
2) The *Peripheral Nervous System* is made up of motor and sensory nerves.	**List** the parts of the peripheral nervous system.
a) *Motor nerves* are responsible for controlling movement. They tell muscles in your body to contract ("flex") or relax, causing movement.	**Briefly describe** motor nerves.

TRAINEE TEXT	INSTRUCTOR NOTES
b) *Sensory Nerves.* These nerves send messages to the brain (and get messages from the brain) about the world around you. They are responsible for recognizing feelings of hot, cold, light, pain, smell, taste, motion and balance.	**<TG PAGE 1-47>** **Briefly describe** sensory nerves.
3) The *Autonomic Nervous System* is also made up of motor nerves, like the peripheral nervous system.	**Describe** the Autonomic nervous system.
a) It transports messages from the brain to the body using the motor nerves like the peripheral nervous system. It provides automatic and unconscious monitoring and regulation of internal body functions.	
b) Its functions include heartbeat, the force of the heart's contractions, blood vessel diameter, bronchial diameter and pupil dilation and contraction in response to light levels.	
The Nervous System Parts ▸ Central Nervous System · brain and spinal cord ▸ Peripheral Nervous System · motor and sensory nerves ▸ Autonomic Nervous System · like the peripheral nervous system, it uses motor nerves automatic, unconscious monitoring/regulation of internal body functions (like heartbeat, bronchial diameter, etc.) 1-3-2	**Show** Figure 1-3-3.

TRAINEE TEXT	INSTRUCTOR NOTES
System 2: The Circulatory System. The circulatory system carries blood to and from all parts of the body. The blood takes nutrients and oxygen (O_2) to the cells of the body and takes carbon dioxide (CO_2) and other waste products from the cells for removal from the body. The circulatory system is made up of the heart, arteries, veins and capillaries.	**<TG PAGE 1-48>** **Describe** the circulatory system.
1) The *Heart* is a four chamber pump and is the most efficient pump known to man. It is located below and to the left of the breastbone (sternum). It pumps blood through a series of one-way valves.	**Briefly describe** the heart.
2) *Arteries* carry oxygenated blood (blood that is carrying oxygen to cells) away from the heart to the body. Arteries have thick walls that expand and shrink as blood goes through them. They get smaller the further they get from the heart. Most arteries are protected from damage by being buried deep within the muscles or being protected by bones. If cut, arteries bleed a lot of bright red blood that comes out in "spurts."	**Describe** arteries.
3) *Veins* carry blood toward the heart. This blood has dropped its oxygen payload off for use by the cells and carries cell waste products and carbon dioxide away from the cells, to be eliminated from the body. Veins get larger as you get closer to the heart and do not expand or contract like arteries. If cut, they too can bleed a lot. However, this blood "flows" (not spurts) from the wound and is a dark red color.	**Describe** veins.

TRAINEE TEXT	INSTRUCTOR NOTES
NOTE: A normal adult has approximately 5-6 liters of blood. Simple cuts should clot within 6 to 10 minutes.	**<TG PAGE 1-49>** **Tell** trainees that adults only have 5-6 liters of blood and that clotting occurs within 10 minutes except in cases of hemophilia and bad bleeds.
4) *Capillaries* are thin-walled vessels. They are found between arteries and veins throughout the body. Capillaries carry oxygenated blood from the arteries to the cells of the body and exchange it for carbon dioxide and other waste products made by the cells. The waste products and blood are then taken to the veins and carried back to the heart. If cut, they "ooze."	**Describe** capillaries.
5) *Blood* is made of *plasma* (fluid that carries carbon dioxide, nutrients, hormones and water) *red blood cells, white blood cells* and *platelets. Red blood cells* carry oxygen to the cells and carbon dioxide away from the body (oxygen sticks to a substance known as *hemoglobin*). *White blood cells* fight diseases, and *platelets* are used to create clots.	**Describe** blood and its parts.



The Circulatory System
Parts

- Heart
- Arteries
- Veins
- Capillaries
- Blood

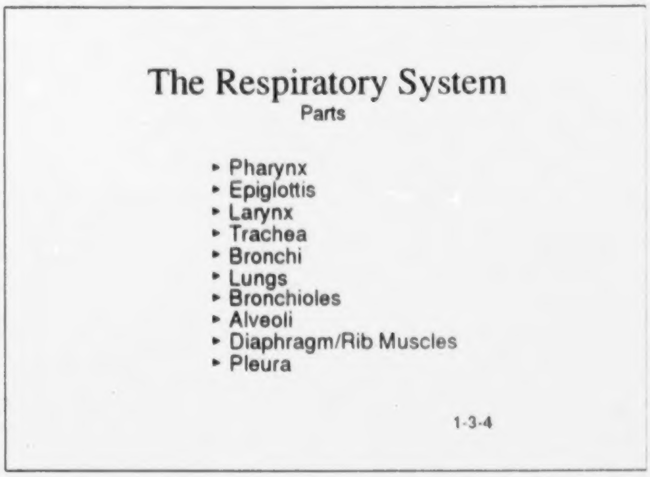
1-3-3

TRAINEE TEXT	INSTRUCTOR NOTES
System 3: The Respiratory System. The respiratory system is the system that makes/lets us breathe. It takes in the oxygen we need and is responsible for carrying out waste products, like excess water and carbon dioxide. It also is used to help you maintain your body temperature (known as "temperature regulation").	**<TG PAGE 1-50>** **Show** Figure 1-3-4. **Describe** the Respiratory System.
NOTE: It is absolutely necessary to the survival of a human that breathing continue. If breathing stops, the person will die.	**Tell** trainees that it is absolutely necessary to breathe or a person will die. It is for this reason that breathing status is always included in the initial surveys (questioning) of callers.
Respiration (breathing) is an automatic function. It is controlled by respiratory centers in the brain that are sensitive to the level of carbon dioxide in your blood. Carbon dioxide levels are constantly being monitored by carbon dioxide and oxygen sensors that are located in your carotid arteries (on the sides of your neck). When oxygen levels are too low you will breathe faster. If the carbon dioxide level gets too high, again, you will breathe faster.	**Describe** the automatic functioning of breathing and how it works.
NOTE: Airway obstructions can occur at any point in the respiratory system. It is important to note this and that obstructions don't just occur in the "throat."	**Tell** trainees that blockages can occur anywhere in the respiratory system, not just the "throat."
Agonal respirations are breaths that occur after cardiac arrest and are ineffective in gathering oxygen for the body. They are frequently described as "weak," "heavy," "gasping," "snoring," gurgling" or "moaning." The rate at which these respirations occur are usually referred to as "weak or heavy," "occasional" or "every once in a while.".	**Describe** agonal respirations.

TRAINEE TEXT	INSTRUCTOR NOTES
Generally the caller will not identify cardiac arrest to you because the patient shows these respirations. In some cases, you can identify these respirations by listening. You may be able to hear the patient's breathing in the background (when the caller is near the patient).	**Review** "presentation" (how callers describe something) of agonal respiration.
The respiratory system is made up of the following parts:	**<TG PAGE 1-51>** **List and review** the parts of the respiratory system. **Show** Figure 1-3-4.
1) The *pharynx* is a two channeled organ through which air enters and exits the body. It includes the nasal (in the nose) and oral phalanx (in the mouth). Air can travel in or out through either one of these.	**Briefly describe** the pharynx.
2) The *epiglottis* is a leaf-shaped organ that hangs over the opening of the larynx. When you swallow, it covers the larynx, making food go down the esophagus instead of to the lungs.	**Briefly describe** the epiglottis.
3) The *larynx* is the narrowest part of the respiratory system. Also called the "voice box," it is called this because the vocal cords are found here. If anything gets past your epiglottis and touches them, they will clamp down in an effort to protect your lungs.	**Briefly describe** the larynx.
4) The *trachea* is a round air passage (tube) that is approximately four inches long, through which air passes in and out. It is held open by a series of cartilage "rings."	**Briefly describe** the trachea.

TRAINEE TEXT	INSTRUCTOR NOTES
5) The *bronchi* are two passages, each passage going to a lung.	**Briefly describe** the bronchi. **Show** Figure 1-3-5.
6) The *lungs* are where the actual exchange of oxygen and carbon dioxide takes place. Normal humans have two lungs, with the right lung divided into three lobes and the left lung divided into two lobes	**Briefly describe** the lungs.
7) *Bronchioles* are small air tubes that are found in the body of the lungs. They are simply bronchi that are broken down into smaller branches.	**Briefly describe** the bronchioles.
8) The *alveoli* are small (microscopic), thin walled air sacs. The oxygen exchange takes place across the membranes between the alveoli and the capillaries.	**Briefly describe** the alveoli.
9) *Diaphragm/Rib Muscles* are used to expand (during inhalation) or contract (during exhalation) your lungs. The diaphragm is the major muscle of breathing. "Intercostal muscles" are located between the ribs and also help you breathe.	**<TG PAGE 1-52>** **Briefly describe** the diaphragm.
10) *Pleura* are two thin membranes covering the surfaces of the lung. They serve to lubricate the lung and allow it to easily expand (during inhalation) and contract (during exhalation).	**Briefly describe** the pleura.

TRAINEE TEXT	INSTRUCTOR NOTES

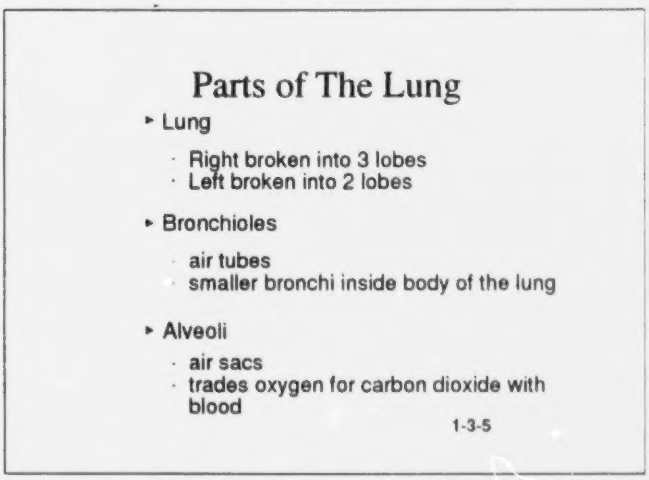


The Respiratory System
Parts

- Pharynx
- Epiglottis
- Larynx
- Trachea
- Bronchi
- Lungs
- Bronchioles
- Alveoli
- Diaphragm/Rib Muscles
- Pleura

1-3-4

<TG PAGE 1-53>



Parts of The Lung

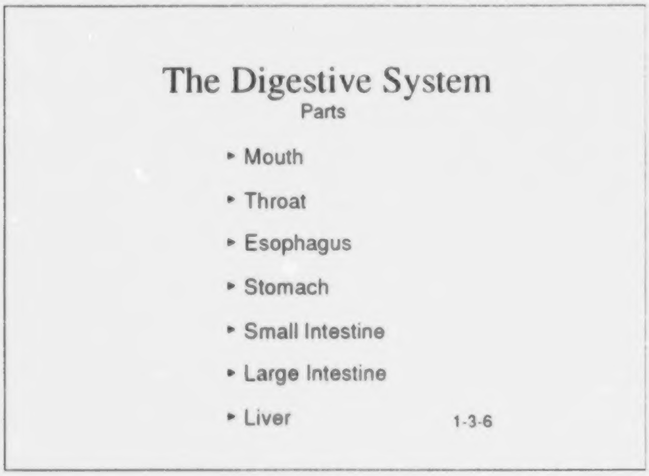
- Lung
  - Right broken into 3 lobes
  - Left broken into 2 lobes
- Bronchioles
  - air tubes
  - smaller bronchi inside body of the lung
- Alveoli
  - air sacs
  - trades oxygen for carbon dioxide with blood

1-3-5

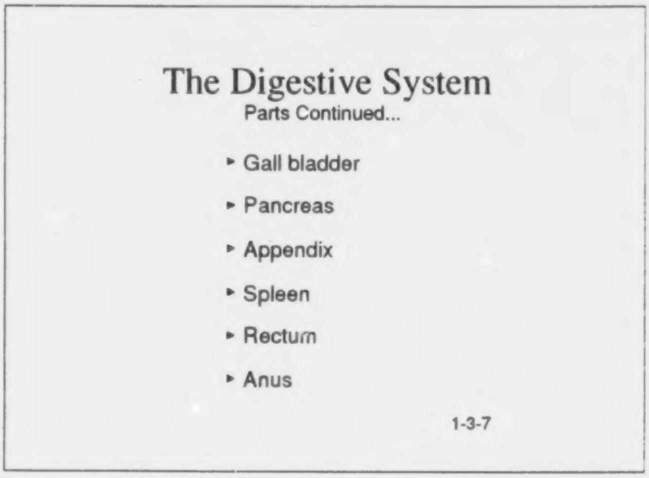
System 4: The Digestive System. This is the system that is responsible for your eating, digesting food and liquids and eliminating waste. The process of digesting food provides your cells with the fuel they need to work. There is only a small number of foods that can be used directly without being broken down.

Discuss the digestive system and its parts.

TRAINEE TEXT	INSTRUCTOR NOTES
The digestive system is made of the following components:	**Show** Figure 1-3-6.
1) The *mouth* chews food, moistens food with saliva and starts the swallowing process. Saliva is produced by your salivary glands at a rate of about 1.5 liters per day. Chemicals in your saliva start digestion by beginning to break down food.	**Briefly discuss** the mouth.
2) Your *throat* consists of the pharynx which is used to transport both food and air. When this is blocked, it is called an "airway obstruction."	**Briefly discuss** the throat.
3) The *esophagus* is about ten inches long. It forces food down toward the stomach by constant, rhythmic contractions which begin at the top and go to the bottom.	**<TG PAGE 1-54>** **Briefly discuss** the esophagus.
4) The *stomach* receives and stores food. It helps push food down toward the bowels. The stomach makes 1.5 liters of *pepsin* per day. Pepsin is used to break down proteins. Digestion in the stomach usually lasts one to three hours.	**Briefly discuss** the stomach.
5) Your *small intestine* receives liquids made by your pancreas, liver and gall bladder. These are used to further digest food. The small intestine is approximately twenty feet long and is made of three sections; the duodenum, jejune and ilium.	**Briefly discuss** the small intestine.
6) Your *large intestine* is approximately five feet long. Its main purpose it to absorb liquid from digested food as it passes through. It absorbs approximately 5-10% of the moisture residing in the products of digestion.	**Briefly discuss** the large intestine.

TRAINEE TEXT	INSTRUCTOR NOTES
7) The *liver* is a very important organ. It changes sugars, fatty acids and amino acids into simpler products for the body to use. It also neutralizes the harmful products that are produced by digestion. Sugars that are to be used immediately by the body are stored there. The liver also produces products that help your platelets clot, and it also makes products that improve your body's ability to fight diseases.	**Briefly discuss** the liver.
 The Digestive System Parts - Mouth - Throat - Esophagus - Stomach - Small Intestine - Large Intestine - Liver 1-3-6	**<TG PAGE 1-55>** **Show** Figure 1-3-7.
8) The *gall bladder* produces and stores bile (approximately 2-3 oz). Bile is used to digest fats in your food.	**Briefly discuss** the gall bladder.
9) The *pancreas* regulates the level of sugar in the blood and also makes juices/enzymes that digest fats, starches and proteins. It has two main functions; producing the enzymes that digest fats, starches and proteins and producing *insulin* (which regulates sugar levels in the blood stream).	**Briefly discuss** the pancreas.

TRAINEE TEXT	INSTRUCTOR NOTES
10) The *appendix* is thought to play a part in the immune responses of children. It is about three to four inches long and has no other known purpose.	**Briefly discuss** the appendix.
11) The *spleen* produces and destroys blood cells. It's most important role is in fighting infection by acting as a filter to eliminate bacteria from the bloodstream. If destroyed, part of it's function can be taken over by the bones and marrow in your body.	**Briefly discuss** the spleen.
12) The *rectum* is a large, hollow organ used to store feces until expelled.	**<TG PAGE 1-56>** **Briefly discuss** the rectum.
13) The *anus* is about two inches long. It controls the escape of liquids, gases and solids produced by digestion through contraction of the *sphincter muscle.*	**Briefly discuss** the anus.



The Digestive System

Parts Continued...

- Gall bladder
- Pancreas
- Appendix
- Spleen
- Rectum
- Anus

1-3-7

TRAINEE TEXT	INSTRUCTOR NOTES
System 5: The Musculoskeletal System. This is the system of bones, muscles and their connecting tissues. It gives support for the body and provides movement through the actions of muscles and joints. Vital organs like your lungs and heart are protected by bones, which also are responsible for making and destroying blood cells. Bones are also important for storing minerals that your body needs.	**Discuss** the musculoskeletal system and its parts.
Muscles are attached to bones. Muscles allow you to move through their contracting and relaxing actions. They also help us breathe (remember the diaphragm?), they help circulate blood (the heart *is* a muscle) and they aid in digestion (the stomach).	**<TG PAGE 1-57>** **List** the parts of the musculoskeletal system: head, chest, vertebral column, upper/lower extremities and pelvis.
The musculoskeletal system is made up of the following; the head, vertebral column, chest, upper extremities, pelvis and lower extremities. Other parts include the three types of muscles, tendons and ligaments.	**List** the parts of the musculoskeletal system: head, chest, vertebral column, upper/lower extremities and pelvis.
1) The *head* is composed of four bone groups; the *skull* (includes the cranium and base), the *face, maxillary* (upper jaw) and *mandible* (lower jaw).	**Describe** the head.
2) The *vertebral column* is also known as the *spinal column.* It has thirty-three bones, in the following order (head to tail); seven *cervical spine* (base of skull and neck), twelve *thoracic spine* (upper back), five *lumbar spine* (lower back), *sacral fused* (near pelvis) and *coccyx fused* (tailbone).	**Describe** the vertebral column.

TRAINEE TEXT	INSTRUCTOR NOTES
3) The *chest* is comprised of the ribs, sternum (breastbone), xiphoid and the vertebral column in the back.	**Describe** the chest.
4) The *upper extremity* is made of:	**Describe** the upper extremity and its parts.
a) the *shoulder girdle,* which is made of the *clavicle* (collarbone), the *scapula* (shoulder blade) and the *shoulder joint;*	
b) the *arm,* which is made of the *humerus* (upper arm);	
c) the *forearm,* which is made of the *radius* and *ulna* and	
d) the *hand,* which is made of *carpals, metacarpals* and *phalanges.*	
5) The *pelvis* is made of the ilium, the pubic symphysis and the iliac crest.	**<TG PAGE 1-58>** **Describe** the pelvis and its parts.
6) The *lower extremity* is made of:	**Describe** the lower extremity and its parts.
a) the *upper leg,* which is made of the *femur* (thigh bone), *knee joint* and *patella* (kneecap);	
b) the *lower leg,* which is made of the *tibia* and *fibula* and	
c) the *foot* which is made of tarsals, metatarsals and phalanges.	
7) The three types of *muscles* include:	**Describe** the three types of muscles.
a) *voluntary muscles,* which are consciously controlled (like when you are walking);	

TRAINEE TEXT	INSTRUCTOR NOTES
b) *involuntary muscles*, which are unconsciously controlled (like blood vessels, diaphragm) and	
c) *cardiac muscles*, which are the muscles that make the heart pump. The contractions are controlled by the autonomic nervous system and by hormones.	
8) *Tendons* and *ligaments* are connective tissues. Tendons connect your muscles to your bones. Ligaments connect your bones to other bones.	**Describe** the difference between tendons and ligaments.
The Musculoskeletal System Parts ▸ Head ▸ Vertebral Column ▸ Chest ▸ Upper Extremities ▸ Pelvis ▸ Lower Extremities 1-3-8	**<TG PAGE 1-59>**
System 6: The Genito-Urinary System. This system is made up of the organs of waste elimination and reproduction.	
All humans have the following four parts in their urinary system. This system is responsible for the removal of liquid wastes from the body and is composed of:	**Show** Figure 1-3-9.
1) *kidneys*, which are used to filter wastes from your blood stream and make urine;	**Discuss** kidneys and their function.

TRAINEE TEXT	INSTRUCTOR NOTES
2) *ureters*, which are tubes that connect kidneys to the urinary bladder and through which urine flows to the bladder;	**Discuss** ureters and their function.
3) a *urinary bladder*, which is the reservoir for urine and	**Discuss** the urinary bladder.
4) a *urethra*, which is the tube that urine passes through on the way out of the bladder and body.	**Discuss** the urethra.
The human reproductive system differs between men and women. Each has its own parts and functions. Female and male reproductive systems are described below.	**<TG PAGE 1-60>**
1) The *female reproductive system* is made of the following parts: a) *fallopian tubes*, which carry eggs from the ovaries to the uterus; b) *ovaries*, which produce female hormones; mature, store and release eggs; c) *uterus*, where the fetus (fertilized egg) develops and where menstruation (periods) occurs and d) *vagina*, the birth canal through which babies are born.	**Describe** the female reproductive system and its parts.
2) The *male reproductive system* is made of: a) the *prostate*, which surrounds the urethra and produces the fluid that makes up most of the bulk of semen; b) *testes*, which produce sperm and male hormones;	**Describe** the male reproductive system and its parts.

TRAINEE TEXT	INSTRUCTOR NOTES

c) *scrotum*, which surrounds and protects the testes and

d) the *penis*, which contains the urethra and through which semen and urine passes.

<TG PAGE 1-61>

The Genito-Urinary System

Parts

- Kidneys
- Ureters
- Bladder
- Urethra
- Female Reproductive System
- Male Reproductive System

1-3-9

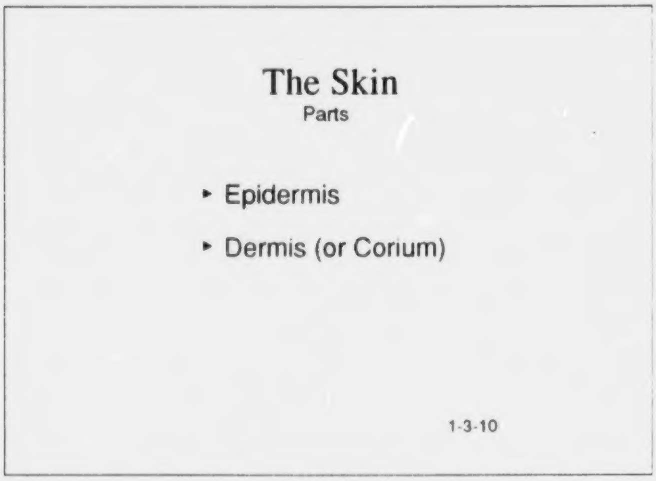
Describe the skin and its parts.

System 7: The Skin. The skin is the outer covering of the body and is the largest organ of the body. Skin serves as a protective barrier against microorganisms, protects the soft tissues and organs below it from injuries and acts like insulation against heat and cold. It even helps remove wastes from the body through sweat.

The skin performs other important functions as well. It provides protection against the sun's rays through pigmentation and it helps convert some of the sun's energy into vitamin-D. Finally, receptors in the skin enable the body to sense pain, heat, cold, touch and pressure.

TRAINEE TEXT	INSTRUCTOR NOTES
The skin consists of the following two major components:	**<TG PAGE 1-62>** **Show** Figure 1-3-10.
1) The *epidermis* is the thin, outer layer of skin. It is made up of various cell types, and its thickness varies across different areas of the body (thickest in the hands and feet). The outer layer of the epidermis is constantly being shed. Its cells are non-living and require no blood for nourishment. As long as the epidermis remains intact, no microorganism can enter the body through the skin.	**Discuss** the epidermis.
2) The *dermis* (or *corium*) is the inner layer of skin. It is the thickest layer of the skin. The dermis is made up of connective tissue that contains nerves, sweat glands and blood vessels. Sensations like heat, cold, touch, etc. are felt through the nerves found here.	**Discuss** the dermis/corium.
The body's reaction to heat and cold causes the expansion and contraction of the blood vessels found in the dermis. As a result of the expansion and/or contraction of the blood vessels in the dermis, more or less blood flows through the vessels. The end result of this expansion/contraction is the loss or conservation of body heat.	**Describe** how heat/cold affect the blood vessels in the corium.

TRAINEE TEXT	INSTRUCTOR NOTES



The Skin
Parts

- Epidermis
- Dermis (or Corium)

1-3-10

<TG PAGE 1-63>

Exercise 1: Systems of the Body - Match Game

Instructions: On the following page is a table consisting of questions and answers. In the left column are twelve answers. Write the number of the question that corresponds to the answer found in the left column.

Write your answers on the lines provided on the left side of the table. You have ten minutes to complete this exercise. Upon completion of this exercise, the instructor will review the answers with you. Be sure to ask any questions you may have at this time.

Tell trainees to complete Exercise 1. Answers are found in IG NOTE #2, Exercise 1, page 1-109 of this guide.

TRAINEE TEXT	INSTRUCTOR NOTES

Answers	*Questions*
Central, peripheral and autonomic	1. Narrowest part of the respiratory system; aka "voice box"?
Pharynx	2. Parts of the pelvis?
Pancreas	3. Connect muscles to bones?
Motor and sensory	4. Four major parts of the circulatory system?
Kidneys, ureters, urinary bladder and urethra	5. Three subsystems of the nervous system?
Ilium, pubic symphysis and iliac crest	6. Carry oxygen to the cells?
Heart, arteries, veins and capillaries	7. Regulates level of blood sugar; produces enzymes that break down starches, fats and proteins?
Ligaments	8. Carry oxygenated blood to the body, away from the heart?
Red blood cells	9. Connect bones to bones?
Larynx	10. Two nerve types of the peripheral nervous system?
Tendons	11. Parts of the urinary system?
Arteries	12. Two-channeled body through which air enters/exits the body?

<TG PAGE 1-64>

TRAINEE TEXT

What Really Kills Patients?

Now that you understand the basics of the seven systems of the body, you need to understand what really kills patients.

Many **traumatic** emergencies get worse as time passes, while **medical** emergencies tend to get better over time. Three problems can worsen the medical situation over time. These are (1) severe blood loss, (2) breathing obstructions and (3) cardiac arrest. The EMD can have the most effect on these three situation by instructing callers in some form of emergency medical intervention.

Death is caused by many things. *Traumatic causes* are blood loss, airway obstructions that prevent breathing, shock and brain/spinal cord damage. The most common *non-traumatic* cause of death is cardiac arrest.

Levels of Consciousness, Shock and Respiratory Distress

Consciousness, shock and respiratory distress are the 3 major criteria used to determine dispatch categories. At this point you need to know a few things that will help you better do your job.

1) Consciousness is very hard to determine without actually seeing the patient. *You must rely on the protocols and information from callers to get you this information.* The protocols are designed to help you do this.

2) Not all sick people appear sick. At the same time, patients in shock or respiratory distress will look sick. When responding personnel get to the patient and they see a pale, diaphoretic ("sweaty"), weak and nauseous person they immediately know they have a sick person on their hands.

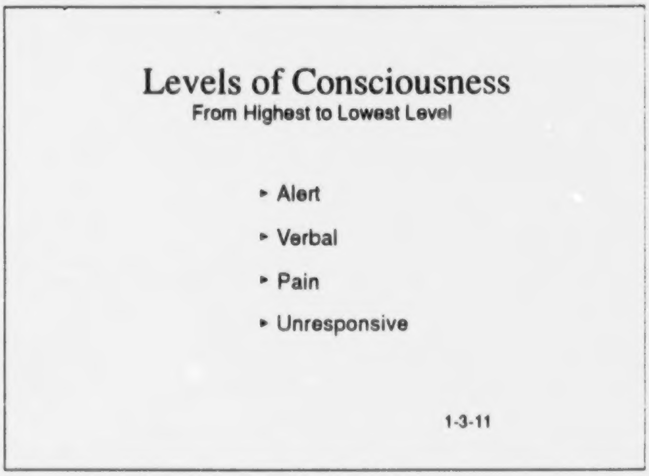
INSTRUCTOR NOTES

<TG PAGE 1-65>

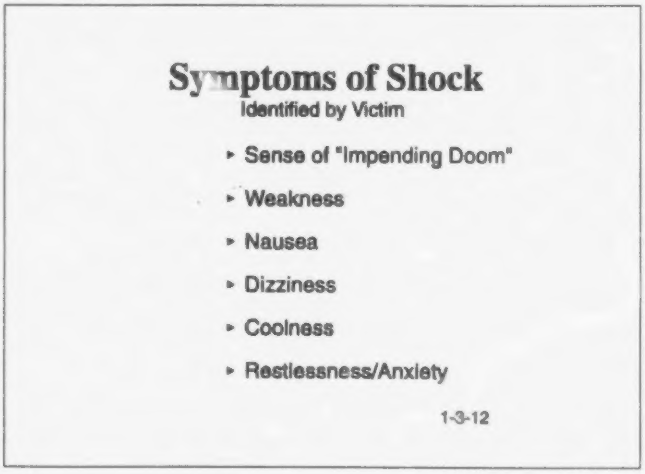
Discuss what kills patients.

<TG PAGE 1-66>

TRAINEE TEXT	INSTRUCTOR NOTES
3) It is up to you to be able to recognize these truly sick people based on the information you get from callers.	
Levels of Consciousness. There are four levels of consciousness that you need to learn. They are taught in order of their level of severity, with alert being the highest level and unresponsive being the lowest and most serious.	**List and describe** the four levels of consciousness.
1) *Alert* (is the patient awake and aware of their surroundings?) is the highest level of consciousness. If a patient is determined to be alert, then there is less cause for concern.	**Show** Figure 1-3-11.
2) *Verbal* is the second highest level of consciousness. These patients are awake only when you talk to or yell at them (verbal stimulus). They tend to fall asleep unless you constantly talk to them.	
3) *Pain* is the second lowest level of consciousness. A person in this state is only able to be awakened with noxious (painful) stimuli. They require noxious stimulants to stay awake.	
4) *Unresponsive* is the lowest and most dangerous level of consciousness. Patients in this state can't be aroused by *any* stimulus.	

TRAINEE TEXT	INSTRUCTOR NOTES
 Levels of Consciousness From Highest to Lowest Level ▸ Alert ▸ Verbal ▸ Pain ▸ Unresponsive 1-3-11	**<TG PAGE 1-67>**
Determining Consciousness. How can you determine consciousness? Your EMDPRS protocols will help you figure out a patient's consciousness level. Generally, you can determine consciousness by asking the caller: 1) Is the patient awake? 2) Have you tried to wake them up? 3) Can they talk to you?	**Tell** trainees how to determine consciousness. Give them the three questions they need to ask the caller.
Don't worry about using consciousness categories with the responders. For example, if the caller says that the patient is talking gibberish and can only stay awake when they yell at him, then tell that to the responding personnel. You just need to recognize the level of consciousness and dispatch accordingly.	**Tell** trainees that it is much more important to pass on information to the responders exactly as they receive it rather than worrying about correct consciousness classification.

TRAINEE TEXT	INSTRUCTOR NOTES
NOTE: From a dispatcher's perspective, you are trying to determine whether a patient is conscious or is in an altered state of consciousness. Your priority is airway maintenance. It is not so important to determine why the patient is unconscious, all that matters is that the patient ***is*** unconscious. If the patient is unconscious, turn them on their side and monitor their breathing	**<TG PAGE 1-68>** **State** that you are concerned with determining consciousness. You are most concerned with breathing; so if the patient is unconscious, roll them on their side (unless you suspect spinal injury) and keep an eye on breathing.
QUESTION: *Can you describe the levels of consciousness? How do you determine each level of consciousness?*	**Ask** this question of trainees and have them tell you how to determine level of consciousness. You may want to prepare sample descriptions in advance that are based on real-life scenarios or like those found in Appendix B.
Shock. Shock is a major killer of patients. It can rapidly appear, almost without symptoms. For this reason, shock is often called the "silent killer." It is defined as "inadequate tissue perfusion." This simply means that there is a lack of circulation throughout the body, but most importantly to the major organs (heart, lungs, brain, kidneys, etc.).	**Show** Figure 1-3-12. **Define** shock.
1) *Symptoms of shock* (described by patient) include the following. Not all patients show these, and sometimes **none** are present:	**List/describe** symptoms of shock.

TRAINEE TEXT	INSTRUCTOR NOTES
a) a feeling of "impending doom" (that something terrible is going to happen soon, that death might be imminent); b) weakness; c) nausea; d) thirst; e) dizziness; f) coolness and g) restlessness/anxiety.	**Tell** trainees that "symptoms" are what are described by the patient while "signs" are things observed by the caller or a bystander. **<TG PAGE 1-69>**
 **Symptoms of Shock** Identified by Victim ▸ Sense of "Impending Doom" ▸ Weakness ▸ Nausea ▸ Dizziness ▸ Coolness ▸ Restlessness/Anxiety 1-3-12	
2) *Signs of shock* (described by the caller based on their own observation) include the following:	**Show** Figure 1-3-13.
a) pale, cool and/or moist skin;	**List/describe** signs of shock.
b) shallow and/or rapid breathing;	

TRAINEE TEXT	INSTRUCTOR NOTES

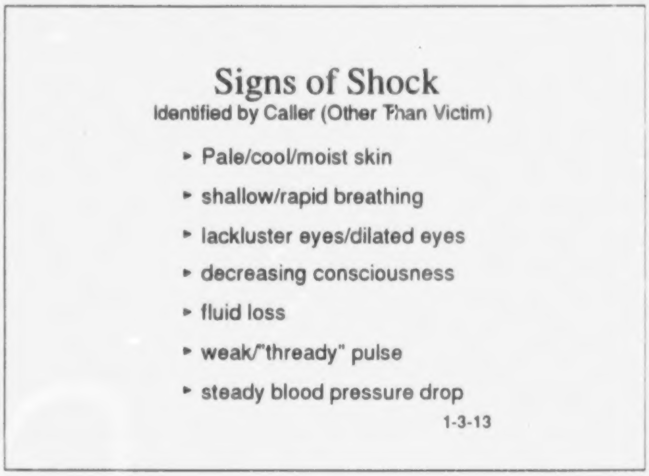
c) lackluster eyes and/or dilated pupils (pupils appear larger than they should);

d) decreasing levels of consciousness leading to unconsciousness;

e) fluid loss from bleeding, vomiting or diarrhea;

f) weak or "thready" pulse and

g) a steady drop in blood pressure.



Signs of Shock
Identified by Caller (Other Than Victim)

- Pale/cool/moist skin
- shallow/rapid breathing
- lackluster eyes/dilated eyes
- decreasing consciousness
- fluid loss
- weak/"thready" pulse
- steady blood pressure drop

1-3-13

Types of shock. There are many types of shock. You may never encounter them all, but the most common are listed and described below.

1) *Anaphylactic shock* (also called "allergic shock") usually accompanies the ingestion or inhalation of a substance to which a patient is severely allergic. It frequently occurs with insect stings as well. Signs and symptoms include difficulty breathing, swelling of the face and or tongue, tightness in the chest, itching/burning skin and hives covering large parts of the body.

<TG PAGE 1-70>

Show Figure 1-3-14.

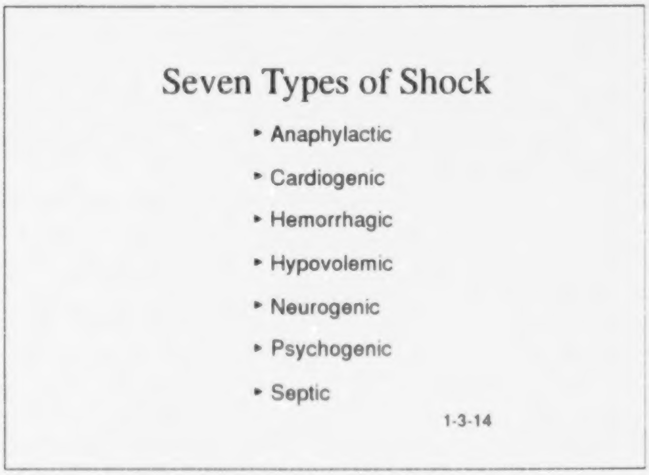
List and describe the types of shock.

Describe anaphylactic shock and its causes.

TRAINEE TEXT	INSTRUCTOR NOTES
	<TG PAGE 1-71>
2) *Cardiogenic shock* occurs when the heart is no longer able to develop enough pressure to circulate blood properly.	**Describe** cardiogenic shock and its causes.
3) *Hemorrhagic shock* occurs when the body loses large amounts of blood through internal or external bleeding. It also occurs with hypovolemic shock.	**Describe** hemorrhagic shock and its causes.
4) *Hypovolemic shock* occurs when the body loses large amounts of body fluids through vomiting or diarrhea.	**Describe** hypovolemic shock and its causes.
5) *Neurogenic shock* usually occurs with spinal cord damage. Blood vessels that are normally tightened ("constricted") begin to relax and blood pressure rapidly drops. Blood begins to pool below the level of the spinal cord injury.	**Describe** neurogenic shock and its causes.
6) *Psychogenic shock* (aka "fainting;" aka "vasovagal reaction") occurs when blood vessels suddenly dilate (expand or relax) due to some shock to the system like extreme fear or minor injury. Blood flow to the brain is temporarily interrupted and the person "faints."	**Describe** psychogenic shock and its causes.
7) *Septic shock* is caused by severe infections. Toxic substances from the infection cause blood vessels to dilate and plasma to be lost through vessel walls.	**Describe** septic shock and its causes.
NOTE: The most common types of shock you will encounter are anaphylactic, cardiogenic, hemorrhagic, hypovolemic and septic.	**Tell** trainees they will mostly deal with anaphylactic, cardiogenic, hemorrhagic, hypovolemic and septic shock.

TRAINEE TEXT	INSTRUCTOR NOTES

<TG PAGE 1-72>



Seven Types of Shock

- Anaphylactic
- Cardiogenic
- Hemorrhagic
- Hypovolemic
- Neurogenic
- Psychogenic
- Septic

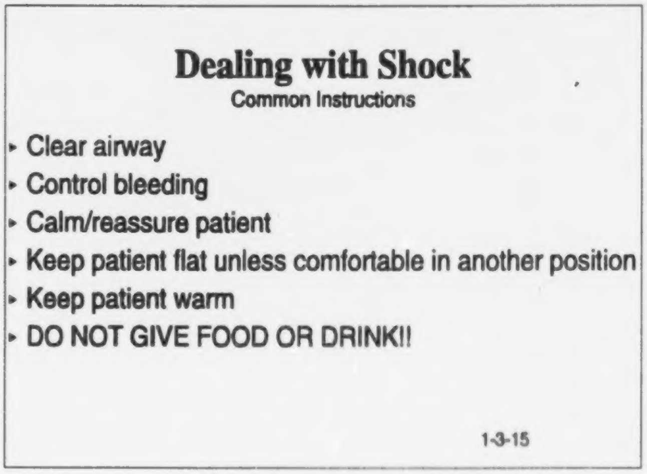
1-3-14

Dealing With Shock. Shock can kill. There are any number of things you can tell callers to do to alleviate the danger of shock until help arrives. These are listed and described below.

Show Figure 1-3-15.

Tell trainees how to deal with shock.

1) DO NOT GIVE THEM ANYTHING TO EAT OR DRINK!
2) Make sure the patient's airway is clear so they can breathe.
3) Control bleeding (if external) by the use of direct pressure.
4) Calm and reassure the patient.
5) Lay patient on side (preferably left-side) or allow them to remain in a position that is most comfortable, unless they are trauma patients.
6) DO NOT MOVE TRAUMA PATIENTS!!!!

TRAINEE TEXT	INSTRUCTOR NOTES
7) Keep the patient warm and prevent the loss of body heat by covering the patient with something.	**<TG PAGE 1-73>**
 **Dealing with Shock** Common Instructions ‣ Clear airway ‣ Control bleeding ‣ Calm/reassure patient ‣ Keep patient flat unless comfortable in another position ‣ Keep patient warm ‣ DO NOT GIVE FOOD OR DRINK!! 1-3-15	
QUESTION: *What is shock? What are its signs and symptoms? Can you name 5 types of shock? How would you tell a caller to deal with shock?*	**Ask** these questions, which are based on the information previously presented.
Respiratory Distress vs. Breathing Difficulty. Callers will often say that a person is "having a hard time breathing." It is up to you to determine if the caller is describing respiratory distress or breathing difficulty.	**Review** respiratory distress and breathing difficulty.

TRAINEE TEXT	INSTRUCTOR NOTES
It is hard to tell if a patient is suffering from respiratory distress or has a breathing problem without understanding the difference. Each can occur from a variety of sources, including benign (not dangerous) sources like allergies or colds. Because of the difficulty in distinguishing true respiratory distress from breathing difficulty, these calls can be among the most challenging you will face.	**<TG PAGE 1-74>**
Breathing Difficulty Scenarios 1) The breathing problem is present with other symptoms or chief complaint types (more on these in Module 3). 2) The patient appears sick, but it may be due to the chief complaint and not the breathing difficulty. 3) Most people have breathing difficulty when vomiting. However, this does not constitute "distress."	**Review** breathing difficulty scenarios.
True Respiratory Distress 1) Patients in true respiratory distress are *very* sick people. These patients *look, act* and *sound* sick, usually being able to speak only short phrases (or 1 to 2 word sentences) if they have to speak. Their breathing may be described by callers as very "noisy" (***or very quiet***). 2) Patients in true respiratory distress are putting all of their efforts and energy into trying to breathe or getting where they think there might be more air. They look as if they were (and still are) working hard.	**Review** "true" respiratory distress.

TRAINEE TEXT

3) Patients in respiratory distress appear sweaty (diaphoretic), pale and sometimes blue (cyanotic). What is happening is that in cases of true respiratory distress, the patient is rapidly running out of oxygen, losing the ability to keep on breathing often due to fatigue or airway obstruction.

4) Choking is also a form of respiratory distress. Persons with obstructed airways will demonstrate classic choking symptoms. The caller will immediately recognize these as such, unless the caller was not present when the victim choked and found the victim in a collapsed state.

Signs and Symptoms of Respiratory Distress include any of the following. Symptoms and signs can occur in any combination. Some symptoms are:

1) classic choking symptoms (clutching or grasping at the throat);
2) anxiety/restlessness (as the body reacts to a lack of oxygen to the brain);
3) cyanosis (patient turning blue);
4) rapid breathing (tachypnea);
5) noisy respiration;
6) labored appearance; patient appears to be working hard and
7) the patient may be sweaty (diaphoretic).

INSTRUCTOR NOTES

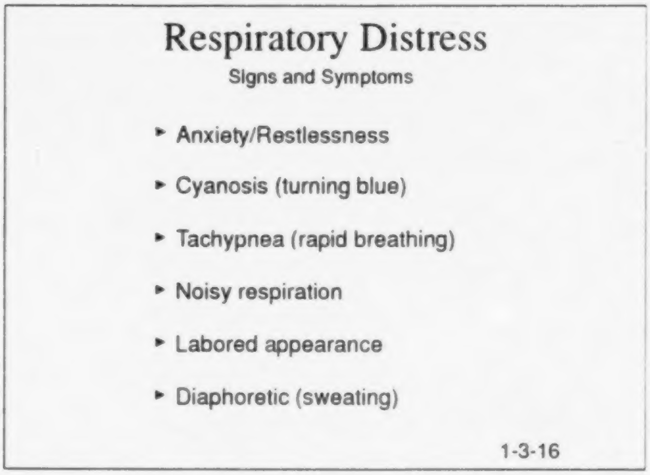
<TG PAGE 1-75>

Show Figure 1-3-16.

Describe the signs and symptoms of true respiratory distress.

TRAINEE TEXT

QUESTION: *Can you describe respiratory distress? What are the major signs and symptoms of true respiratory distress? How is it different from breathing difficulty?*



Respiratory Distress

Signs and Symptoms

- Anxiety/Restlessness
- Cyanosis (turning blue)
- Tachypnea (rapid breathing)
- Noisy respiration
- Labored appearance
- Diaphoretic (sweating)

1-3-16

Bleeding

Bleeding has its own set of unique problems and may elicit strong emotional responses. Severe bleeding must be treated immediately.

INSTRUCTOR NOTES

<TG PAGE 1-76>

Ask these questions and review the answers with trainees.

Discuss bleeding.

TRAINEE TEXT	INSTRUCTOR NOTES
The body attempts to stop bleeding using the process we call "clotting." Blood platelets break down and block the hole through which the blood is escaping. When the bleeding is severe (as with a cut artery), the clotting can't happen fast enough or completely enough to fill the hole, resulting in shock and then death.	
Control of Bleeding. Almost all bleeding can be stopped through the use of *direct pressure*. The caller (or a bystander) is told to use a universal bandage or clean gauze pad and press down directly on the open wound. In most situations, callers won't have these. Tell them to use the cleanest cloth available.	**<TG PAGE 1-77>** **Describe** how to control bleeding.
NOTE: ***This is very important.*** When telling callers to use direct pressure, tell them to put *a lot of pressure on the wound.* Using lots of pressure will stop even arterial bleeds.	**Tell** trainees that it's very important that callers put a lot of direct pressure on bleeding wounds.
Tell callers not to remove soaked bandages (or "dressing") because this will rip open the clot that is forming in the wound. If they feel they need to replace the bandage because it is soaked, simply place another on top and continue pressure. If the bleeding has stopped, they can tie the dressing in place with a bandage.	**Point out** that they need to be sure to tell callers NOT to remove soaked bandages but to apply more on top.
Elevate bleeding extremities. This method is good for extremities because it gets the bleeding limb up higher than the heart, thereby slowing the flow of blood through the force of gravity.	**Tell** trainees to tell callers to elevate bleeding extremities.
NOTE: In cases of internal bleeding, you just need to recognize it due to shock issues...there's not a lot you can do about it!!!	

TRAINEE TEXT	INSTRUCTOR NOTES
A Word About Tourniquets. Tourniquets can cause a lot of damage by stopping the flow of blood completely through a limb (usually). This causes nerve and cell damage that is frequently permanent and can even be the cause for an amputation.	**Discuss** tourniquets.
IF A CALLER SAYS THAT A TOURNIQUET HAS ALREADY BEEN APPLIED, LEAVE IT ON! NEVER INSTRUCT CALLERS TO APPLY A TOURNIQUET.	**<TG PAGE 1-78>** **Tell** trainees that, if a caller tells them a tourniquet has been applied, to leave it on because: 1) It may bleed again 2) Clots can travel to other parts of the body
Exercise 2: Bleeding, Shock and Respiratory Distress - Match Game ***Instructions:*** On the following page is a table consisting of questions and answers. In the left column are ten answers. Write the number of the question that corresponds to the answer found in the left column. Write your answers on the lines provided on the left side of the table. You have ten minutes to complete this exercise. Upon completion of this exercise, the instructor will review the answers with you. Be sure to ask any questions you may have at this time.	**Tell** trainees to complete Exercise 2. Answers are found in IG NOTE #2, Exercise 2, page 1-111 of this guide.

TRAINEE TEXT	INSTRUCTOR NOTES

Answers	*Questions*
Symptoms	1. Characteristics described by callers about patients?
"Impending doom," weakness, nausea coolness	2. ***Signs*** of shock?
Shock	3. Types of shock?
Signs	4. Signs of respiratory distress?
Alert, Verbal, Pain and Unresponsive	5. Characteristics described by patients about themselves?
Hypovolemic, hemorrhagic and anaphylactic	6. Process by which platelets break down and block holes where blood is escaping?
Anxiety, cyanosis, rapid breathing, labored appearance, sweaty, noisy respirations	7. Inadequate tissue perfusion; aka "silent killer?"
Neurogenic shock	8. Relaxation of blood vessels, allowing blood to pool below the level of the injury?
Moist skin; shallow breathing; dilated pupils; decreasing consciousness	9. ***Symptoms*** of shock?
Clotting	10. Four levels of consciousness?

<TG PAGE 1-79>

TRAINEE TEXT

Common Medical Terms

As an EMD you will hear many medical terms. It is important that you become familiar with these terms so you can interpret them for your own use, or as needed to callers. Over time you will become more familiar with them because you will hear them frequently. Other terms that you need to become familiar with are found in ***Appendix A, Glossary.***

Following is a list of terms with which you should become familiar.

1) ***Abdominal aortic aneurysm*** - dilated section of the lower aorta in the abdomen; can rupture causing severe pain, internal bleeding and even death
2) ***Abrasion*** - type of injury caused by the scraping away of portions of skin
3) ***Acute*** - sharp, severe or having rapid onset; usually short course and not chronic
4) ***Anaphylactic shock*** - state of collapse due to injection of or exposure to (including ingestion, breathing and skin contact) a substance to which the victim is allergic
5) ***Angina*** *(also angina pectoris)* - a steady, dull, squeezing pressure; choking or suffocating pain; almost exclusively used to indicate heart or chest pains; can radiate out to the neck, arms or shoulder; is due to the lack of adequate oxygen delivery to the heart muscle (through blockage of coronary arteries)
6) ***Anoxia*** - lack of oxygen
7) ***Appendicitis*** - inflammation of the appendix resulting in severe pain, fever and nausea

INSTRUCTOR NOTES

<TG PAGE 1-80>

Have trainees review these medical terms, and tell them that others they may see or hear are found in their glossary.

<TG PAGE 1-81>

TRAINEE TEXT	INSTRUCTOR NOTES
8) ***Arterial hemorrhage*** - bleeding from an artery; a cut or punctured artery will usually emit bright red blood in spurts or waves (though it can be a steady flow if the artery is deeply buried)	
9) ***Asthma*** - disease characterized by spasms of bronchial tubes, resulting in shortness of breath and "wheezing"; can be fatal if not quickly treated	
10) ***Benign*** - not dangerous; not recurrent or progressive	
11) ***Blood pressure*** - the pressure exerted by the blood against the walls of the arteries as it travels through the body	
12) ***Cardiac arrest*** *(aka "sudden death")* - sudden cessation of heart functions; usually confused with myocardial infarction (MI)	
13) ***Carbon monoxide*** *(CO)* - a poisonous gas found mainly in exhaust fumes of gasoline and diesel powered engines	
14) ***Cardiopulmonary Resuscitation*** *(also CPR)* - the act of attempting to restore consciousness via manual heart massage and lung inflation	
15) ***Contusion*** *(aka "bruise")* - an injury in which the skin is not broken; usually due to sudden impact with hard objects	
16) ***Cranial*** - pertaining to the skull	
17) ***Croup*** - disease characterized by difficult breathing and feelings of suffocation accompanied by an intense, barking cough and swelling of the larynx and/or upper trachea	**<TG PAGE 1-82>**

TRAINEE TEXT	INSTRUCTOR NOTES
18) ***Crowning*** - a state of childbirth in which the baby's head is seen	
19) ***Cyanosis** (also cyanotic)* - discoloration of the skin (usually a gray, blue or purple tint) due to a lack of oxygen in the blood	
20) ***Diaphoresis*** - profuse sweating; is one symptom of respiratory distress but can occur for any reason	
21) ***Ectopic pregnancy*** (aka "tubal pregnancy") - a potentially life-threatening circumstance when a fetus implants itself in a fallopian tube rather than the uterus; after growing there for approximately six weeks, the fetus may rupture through the wall of the tube, causing hemorrhage, severe pain and life-threatening internal bleeding	
22) ***Hemoglobin*** - iron containing pigment of the red blood cells	
23) ***Hematoma*** - swelling caused by blood outside of the blood vessel	
24) ***Hemorrhage*** - Abnormal internal/external discharge of blood	
25) ***Hiatal hernia*** - partial slippage of the upper stomach above the diaphragm; protrusion of the stomach through the diaphragm	
26) ***Hives*** - eruptions of very itchy spots on the skin; usually associated with allergies	
27) ***Hyperventilation*** - increase in the inspiration and expiration of air as a result of an increase in the rate or depth of respiration; usually accompanied by great anxiety; does not usually exist in isolation (is usually symptomatic of a more serious, underlying condition)	**<TG PAGE 1-83>**

TRAINEE TEXT	INSTRUCTOR NOTES
28) ***Hyphema*** - blood in the anterior chamber of the eye in front of the iris	
29) ***Hypothermia*** - drastic lowering of body temperature usually caused by prolonged exposure to extreme cold	
30) ***Hypovolemia*** - diminished blood volume	
31) ***Laceration*** - a tear or cut in the flesh	
32) ***Meningitis*** - inflammation of the spinal cord or brain causing intense headaches, intolerance to light or sound and possibly delirium, convulsions and/or coma	
33) ***Migraine*** - severe headache, frequently resulting in disordered/distorted vision, nausea and vomiting	
34) ***Myocardial Infarction*** (aka M.I., "heart attack") - death of an area of the heart muscle due to obstructions in blood flow or sometimes confused with cardiac arrest which is the end result of an M.I.	
35) ***Ocular trauma*** - injury to the eye	
36) ***Orbital fracture*** - a break in the portion of the skull that encases the eyeball	
37) ***Paralysis*** - loss or impairment of motor function due to injury in part of the body	
38) ***Pericarditis*** - inflammation of the sac that encloses the heart	**<TG PAGE 1-84>**
39) ***Perineum*** - the genital area	
40) ***Pulse*** - a pressure wave exerted against the arteries upon the contraction of the heart; can be felt by placing fingertips on an artery where it passes close to the skin	

TRAINEE TEXT	INSTRUCTOR NOTES
41) ***Signs*** - something a rescuer can see, hear, feel and occasionally taste concerning a patient; not the same as symptom	
42) ***Stroke*** - sudden interruption of blood flow to an area of the brain (due to obstruction, bleeding, clot, etc.) causing loss of strength, feeling, speech or even decrease in consciousness	
43) ***Symptom*** - something a patient expresses about themselves; examples are "My chest hurts; I'm cold; I have a sharp pain in my head," etc.	
44) ***Tachypnea*** - rapid breathing; is one symptom of respiratory distress	
45) ***Thoracic Aortic Aneurysm*** - dilation of a main blood vessel in the chest cavity	
46) ***Tourniquet*** - a bandage wrapped tightly around an extremity used to slow or stop bleeding/blood loss	
47) ***Toxic*** - poisonous	
48) ***Trauma*** - an injury (physical, emotional or psychological) inflicted by some violent event or other external force	
49) ***Venous*** - of or pertaining to the veins	
Summary	**<TG PAGE 1-85>**
This unit has given you the basic medical knowledge that you must have in order to successfully understand and deal with the medical issues that you will face on a daily basis. The information given to you in this unit is basic information. All descriptions and/or definitions are generic. They are not strict medical definitions.	**Review** the unit. Ask for (and answer) trainee questions.

TRAINEE TEXT	INSTRUCTOR NOTES
This unit will help prepare you for using the EMDPRS that you will be taught in Module 3. Before you get to that point though, you need to learn how to get information from the people who call you. **Module 2, Information Gathering and Dispatch** teaches you how to do this.	**Conduct** Team-Tic-Tac-Toe. See IG NOTE #3, page 1-113 of this guide. **Conduct** Module Exercise, page 1-123 of this guide.

WORD-MATCH GAMES (Exercises 1 and 2)

Materials:

Sheet of instructions and answers to word-match games, Exercise 1 and Exercise 2

Approximate time to complete:

15 minutes

Instructions:

1) Refer trainees to page 1-61 (Exercise 1) or page 1-76 (Exercise 2) of their trainee guides.

2) For this game, trainees try to match the word, paragraph or definition in the left column with its match in the right column. They are allowed to use their guides, BUT ENCOURAGE THEM TO TRY IT WITHOUT USING THE GUIDE FIRST!!! ☺

3) Answers to the game are found on the next page.

EXERCISE 1

WORD MATCH ANSWERS

Trainee Guide "ANSWERS" Column	*Correct Answers*
Central, peripheral and autonomic	5. Three subsystems of the nervous system?
Pharynx	12. Two channeled body through which air enters/exits the body?
Pancreas	7. Regulates level of blood sugar; produces enzymes that break down starches, fats and proteins?
Motor and sensory	10. Two nerve types of the peripheral nervous system.
Kidneys, ureters, urinary bladder and urethra	11. Parts of the urinary system?
Ilium, pubic symphysis and iliac crest	2. Parts of the pelvis?
Heart, arteries, veins and capillaries	4. Four major parts of the circulatory system?
Ligaments	9. Connect bones to bones?
Red blood cells	6. Carry oxygen to the cells?
Larynx	1. Narrowest part of the respiratory system; aka "voice box"?
Tendons	3. Connect muscles to bones?
Arteries	8. Carry oxygenated blood to the body, away from the heart?

EXERCISE 2

WORD MATCH ANSWERS

Trainee Guide "ANSWERS" Column	*Correct Answers*
Symptoms	5. Characteristics described by patients about themselves?
"Impending doom," weakness, nausea coolness	9. ***Symptoms*** of shock?
Shock	7. Inadequate tissue perfusion; aka "silent killer?"
Signs	1. Characteristics described by callers about patients?
Alert, Verbal, Pain and Unresponsive	10. Four levels of consciousness?
Hypovolemic, hemorrhagic and anaphylactic	3. Types of shock?
Anxiety, cyanosis, rapid breathing, labored appearance, sweaty, noisy respirations	4. Signs of respiratory distress?
Neurogenic shock	8. Relaxation of blood vessels, allowing blood to pool below the level of the injury?
Moist skin; shallow breathing; dilate pupils; decreasing consciousness	2. ***Signs*** of shock?
Clotting	6. Process by which platelets break down and block holes where blood is escaping?

BEST COPY AVAILABLE

TEAM TIC - TAC - TOE

Materials:

Question and answer list
Colored Markers
Chart paper
Easel
Thumbtacks or tape

Approximate time to complete:

45 minutes

Note to the Instructor:

Following the IG NOTE #3 introductory matter you will find two "TIC-TAC-TOE" games for use while reviewing the medical content of Module 1, Unit 3. These games are provided as examples of how you may want to design your own games. They are by no means definitive, and you are free to develop others as you see fir.

The only requirements for your games are that there should be:

1. a copy for trainees to keep upon completion of the game;
2. at least two games and
3. fair and accurate representation of the medical content of this unit.

As you develop your own games, consider passing along your ideas to others. The medical content of this unit can be very difficult for others to work with creatively. Any help or ideas that you can find would probably be greatly appreciated. Also, make sure your copy of the games has instructions for playing and answers!

MODULE 1 - IG NOTE #3

Basic Emergency Medical Dispatch Concepts

Instructions:

Tape or tack two sheets of paper up (on the wall or blackboard) and draw 1 large tic-tac-toe board on each sheet of paper. For this exercise you will run two games simultaneously. This will allow trainees from all groups to hear all of the questions and answers. Teams are allowed to conference for 15 seconds in order to determine their answer.

1. Divide trainees into 4 teams. For simplicity, you can use the same teams created in the first team exercise (IG NOTE #1 from Unit 1).

2. Pair Team 1 with Team 3. They will play each other in Game A.

3. Pair Team 2 with Team 4. They will play each other in Game B.

4. Game A. Assign Team 1 as the "X" team and Team 3 as the "O" team.

5. Game B. Assign Team 2 as the "X" team and Team 4 as the "O" team.

6. Flip a coin to determine who goes first (i.e., heads then "X" teams go first, etc.).

7. Game A. Ask the first question. Coin toss winners get to go first. If they answer the question wrong, then the second team gets a chance to answer. Place an "X" or and "O" wherever they direct you in the TIC-TAC-TOE block and proceed to Game B. If neither team gets the question right, then proceed to Game B.

8. Game B. Ask the first question. Coin toss winners get to go first. If they answer the question wrong, then the second team gets a chance to answer. Place an "X" or and "O" wherever they direct you in the TIC-TAC-TOE block and proceed to Game B. If neither team gets the question right, then proceed to Game A.

9. Continue in this format until a team wins in each game.

Questions for these games are found on the following pages.

MODULE 1 - IG NOTE #3

Basic Emergency Medical Dispatch Concepts

Game A

You do not have to ask these questions in any particular order. They are in the order in which they are presented in the text.

QUESTION	*ANSWER*
1. ________means that you are ultimately responsible for your actions?	Liability
2. Who can be held liable?	The EMD, the local Medical Director and/or the Agency with which s/he works.
3. Why are EMDs rarely found to be negligent?	Because they are trained according to the standards of care established for that community, which are set up to protect others against unreasonable risk or harm. Also because they have been trained to use a medically approved EMDPRS.
4. Who generally is the primary defendant in court cases involving negligence?	The agency an EMD works for.
5. When does the "duty to act" relationship begin?	As soon as the caller requests EMS assistance.
6. Describe what is meant by the term "proximate cause."	That some action taken by the defendant (EMD or Agency) caused an injury to the patient.
7. Define "simple negligence."	Negligent conduct not purposeful or due to "malicious intent."

MODULE 1 - IG NOTE #3

Basic Emergency Medical Dispatch Concepts

QUESTION	ANSWER
8. Name 2 of the 4 methods used to establish a "standard of care."	a. Judge behavior in comparison to others with similar training and experience b. Judge behavior in comparison to local customs (protocols and guidelines) c. Judge behavior in comparison to local or state statutes, laws, ordinances or administrative orders d. Judge behavior in comparison to professional standards published by organizations involved in emergency work
9. Describe the "emergency rule."	It means that someone who is acting in an emergency situation cannot be held to the same standard of conduct as someone not in that situation.
10. What is the "principle of reasonableness/"	What a "reasonable person" would do in the same situation.
11. List and describe the 2 type of damages that can be awarded.	a. *Compensatory* = repaying plaintiffs for money lost or "pain and suffering". b. *Punitive* = payments used to punish defendants
12. When can immunity be granted under the "Good Samaritan" laws?	a. Person acting in good faith b. Person acting in emergency

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Basic Emergency Medical Dispatch Concepts

QUESTION	ANSWER
13. Name 3 things an EMD cannot reveal.	a. Patient names b. What was said in conversation with the caller c. Unusual behaviors not directly attributable to a medical condition (unless danger to the responders) d. Patient lifestyle e. Knowledge of patient HIV(+) status
14. What is meant by "governmental immunity?"	Immunity stemming from laws or statutes established locally or at the state level. Does not apply to EMDs in private agencies or to cases of "gross negligence."
15. List, identify or give examples of behaviors or actions that EMDs should be concerned about.	a. Failure to send EMS resources when requested b. Subjective judgment of caller credibility c. Subjective judgment of caller chief complaint d. An argumentative or combative attitude (on behalf of EMD) e. Allowing prejudices to affect objective decision making (through prior dealing with the caller) f. Giving medical instruction without using locally approved EMDPRS g. Failure to train (or be certified) as an EMD h. Not giving instructions when needed or when a protocol exists for it

QUESTION	ANSWER
16. List 4 strategies used by individuals to avoid litigation.	a. Avoid inappropriate EMD behaviors b. Active participation in QA/QI and continuing education programs c. Seek/obtain certification as an EMD d. Follow policies/procedures/ practices used by your agency and community e. Report problems or problematic situations as soon as possible and in writing

GAME B

You do not have to ask these questions in any particular order. They are in the order in which they are presented in the text.

QUESTION	ANSWER
1. Name the situations where "Good Samaritan" laws protect you from liability.	a. Person acting in emergency b. Person acting in "good faith" c. Persons not guilty of gross negligence or malicious misconduct toward a patient
2. _________ is defined as the "failure to act or perform in a particular situation as any other reasonable, prudent dispatcher (with similar experience/training) would in similar situations.	Negligence
3. Money awarded in a lawsuit is know as __________?	Damages
4. Name 3 of the 4 criteria that courts use in establishing negligence.	a. Duty b. Breach of Duty c. Injury/Damage d. Proximate Cause/Causation
5. What is meant by "breach of duty"?	That you did not perform your duty as established by acting according to the local "standard of care."
6. What are the two types of negligence?	a. Simple b. Gross

MODULE 1 - IG NOTE #3
Basic Emergency Medical Dispatch Concepts

	QUESTION	ANSWER
7.	What is meant by "gross negligence?"	Negligent actions undertaken with the intent to cause harm ("malicious intent") and with disregard for the safety of persons and or property.
8.	What is "abandonment?"	Leaving a patient known to be in a life-threatening condition, including starting medical treatment and then turning over treatment to someone with less medical training than yourself (with the end result being worsening of the patient's condition).
9.	Describe what is meant by "foreseeability."	You can't see what is happening at the scene, so you must rely on the information given to you by the caller. If a situation exists where the on-scene findings are different than those reported by callers then you are not liable.
10.	Define "detrimental reliance."	When an action or service *does not happen,* that a person claims was reasonable to rely on the agency to perform or provide, resulting in injury or worsening of the patient's condition.
11.	Name the two types of consent.	a. Actual b. Implied
12.	Define "Actual Consent."	Direct verbal or non-verbal communication to someone who is giving aid.
13.	Define "Implied Consent. "	In situations where someone is unconscious or unable to respond, it is safe for us to assume that the person would want to be helped.

MODULE 1 - IG NOTE #3

Basic Emergency Medical Dispatch Concepts

QUESTION	*ANSWER*
14. List, identify or describe 3 misconceptions that EMDs tend to have.	a. EMDs need CPR certification b. EMDs need advanced medical training c. EMDs should not be afraid of relaying confidential information to responding personnel (Don't worry about violating confidentiality!!) d. EMDs should be afraid of giving medical instructions e. EMDs should fear telling callers that ambulances are on the way
15. On what 2 levels can strategies for avoiding liability be employed?	a. Individual b. Agency

MODULE 1 - IG NOTE #3
Basic Emergency Medical Dispatch Concepts

QUESTION	ANSWER
16. List and describe 5 strategies an agency can use to avoid liability.	a. Well-defined screening and hiring practices b. Use of a well-organized, well-written orientation and training program c. Regular/objective progress reports for probationary personnel d. Clearly defined job expectations and work descriptions e. Regular review and update of policies and procedures f. Provision of proper EMD training and certification g. Appropriate implementation of an EMD program h. Adequate EMD program management i. Use of a physician to provide medical direction for the program j. Establishment and use of a QA/QI program for dispatch k. Implement ongoing continuing education program l. Budgeting for QA/QI improvements

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Seven Systems of The Body

- *Nervous System*
- *Circulatory System*
- *Respiratory System*
- *Digestive System*
- *Musculoskeletal System*
- *Genito-Urinary System*
- *Skin*

The Nervous System

Parts

- ***Central Nervous System***
  - *brain and spinal cord*
- ***Peripheral Nervous System***
  - *motor and sensory nerves*
- ***Autonomic Nervous System***
  - *like the peripheral nervous system, it uses motor nerves*
  - *automatic, unconscious monitoring/regulation of internal body functions (like heartbeat, bronchial diameter, etc.)*

The Circulatory System

Parts

- *Heart*
- *Arteries*
- *Veins*
- *Capillaries*
- *Blood*

The Respiratory System

Parts

- *Pharynx*
- *Epiglottis*
- *Larynx*
- *Trachea*
- *Bronchi*
- *Lungs*
- *Bronchioles*
- *Alveoli*
- *Diaphragm/Rib Muscles*
- *Pleura*

Parts of The Lung

- ***Lung***
  - *Right broken into 3 lobes*
  - *Left broken into 2 lobes*
- ***Bronchioles***
  - *air tubes*
  - *smaller bronchi inside body of the lung*
- ***Alveoli***
  - *air sacs*
  - *trades oxygen for carbon dioxide with blood*

The Digestive System

Parts

- *Mouth*
- *Throat*
- *Esophagus*
- *Stomach*
- *Small Intestine*
- *Large Intestine*
- *Liver*

The Digestive System

Parts Continued...

- *Gall bladder*
- *Pancreas*
- *Appendix*
- *Spleen*
- *Rectum*
- *Anus*

The Musculoskeletal System

Parts

- *Head*
- *Vertebral Column*
- *Chest*
- *Upper Extremities*
- *Pelvis*
- *Lower Extremities*

The Genito-Urinary System

Parts

- *Kidneys*
- *Ureters*
- *Bladder*
- *Urethra*
- *Female Reproductive System*
- *Male Reproductive System*

The Skin

Parts

- *Epidermis*
- *Dermis (or Corium)*

Levels of Consciousness

From Highest to Lowest Level

- *Alert*
- *Verbal*
- *Pain*
- *Unresponsive*

Symptoms of Shock

Identified by Victim

- *Sense of "Impending Doom"*
- *Weakness*
- *Nausea*
- *Dizziness*
- *Coolness*
- *Restlessness/Anxiety*

Signs of Shock

Identified by Caller (Other Than Victim)

- Pale/cool/moist skin
- shallow/rapid breathing
- lackluster eyes/dilated eyes
- decreasing consciousness
- fluid loss
- weak/"thready" pulse
- steady blood pressure drop

Seven Types of Shock

- *Anaphylactic*
- *Cardiogenic*
- *Hemorrhagic*
- *Hypovolemic*
- *Neurogenic*
- *Psychogenic*
- *Septic*

Dealing with Shock

Common Instructions

- *Clear airway*
- *Control bleeding*
- *Calm/reassure patient*
- *Keep patient flat unless comfortable in another position*
- *Keep patient warm*
- *DO NOT GIVE FOOD OR DRINK!!*

Respiratory Distress

Signs and Symptoms

- *Anxiety/Restlessness*
- *Cyanosis (turning blue)*
- *Tachypnea (rapid breathing)*
- *Noisy respiration*
- *Labored appearance*
- *Diaphoretic (sweating)*

MODULE EXERCISE

Materials:

Question and answer list

Approximate time to complete:

1 hour or until all members of 3 (out of 4) teams are sitting...whichever comes first.

Note to the Instructor:

The Module Exercise that follows this introductory matter is designed to provide an accurate account of the information contained in Module 1, Units 1 through 3. The questions in this exercise are sample questions.

You may want to test individual knowledge in the form of a written exercise. One way to accomplish this is to use a "fill-in-the-blank" or multiple choice format. The format we have chosen to use is an example of another method of assessing trainee knowledge. There is no "one best way" to do this. Our example is just that, an example. You are free to design your own exercise.

The only requirements for your exercise are that it have:

1. a fair and accurate representation of the content of this module;
2. a copy for the trainees to keep/review and
3. answers for any questions, exercise, etc. that you decide to use.

As you develop your own exercises, consider passing along your ideas to others. The content of this module does not necessarily lend itself creative thought! Any help or ideas that you can provide would probably be greatly appreciated by others.

MODULE 1
Basic Emergency Medical Dispatch Concepts
Module Exercise

Instructions:

For this exercise you will have participants line up in their 4 teams at the front of the room. This will allow trainees from all groups to hear all of the questions and answers. Teams are allowed to conference for 15 seconds in order to determine their answer, and they can answer as a group.

1. Divide trainees into 4 teams. For simplicity, you can use the same teams created in the first team exercise (IG NOTE #1 from Unit 1).

2. Ask the first team the first question.

   a. *If the first team to attempt answering gets it right,* the first person in that team sits down and you proceed to the second question and the next team gets the first opportunity to answer it.

   b. *If the first team to attempt answering gets it wrong,* then the question goes to the next team, and so on, until someone gets it right.

   c. *If nobody gets the first question right,* proceed to the second question and the second team gets the opportunity to answer first.

3. If none of the four teams gets it right, read the answer aloud and explain it (as required). Stress that this information may be seen again, *like on the final examination.*

4. Proceed in this fashion until all members of the three teams are sitting, you have run out of questions or time has expired. At this point the game is over and you can proceed to the next training module.

Questions for this exercise are found on the following pages. **You do not have to ask these questions in any particular order. They are in the order in which the information is presented in the text - just don't lose your place or ask the same question twice (unless you're being tricky!!).** ☺

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QUESTIONS FOR MODULE 1 EXERCISE

QUESTION	ANSWER
Module 1 Unit 1 Questions	
1. Name 3 misconceptions about EMDs.	a. Callers too upset to give useful responses b. Callers unable to give useful information to EMD c. Medical knowledge unimportant, therefore use other public-safety dispatchers d. Dangerous NOT to "go lights and sirens" e. EMD too busy dispatching to give medical instructions f. Medical advice over phone can't help patients (may actually be dangerous)
2. ***True or False?*** The EMD must determine the nature and severity of the medical incident type.	True
3. ***True or False?*** It is not the EMD's job to help ensure the safety of bystanders, callers, patients and responding personnel.	False
4. The EMD uses the _______ to provide pre-arrival instructions to callers that prepare them for the responder's arrival	Emergency Medical Dispatch Protocol Reference System (EMDPRS)

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MODULE 1
Basic Emergency Medical Dispatch Concepts
Module Exercise

QUESTION	*ANSWER*
5. Name 5 characteristics of a successful EMD.	a. Helpful/compassionate b. Handles stress c. Masters skills/philosophy of EMD d. Gathers and prioritizes information e. Assists responder in locating patients f. Determines nature of medical emergency without diagnosing g. Helps responders on-scene by doing as they request h. Reacts passively to hostile callers i. Maintains confidentiality
6. What are the three phases of the dispatch function?	a. Call Receiving b. Dispatch c. Post-Dispatch
7. Describe what happens during the call-receiving phase.	EMD takes call, interrogates caller to determining chief complaint and goes to EMDPRS for additional interrogation and information
8. List in order the five questions the EMD is trying to answer by using the interrogation procedures.	a. Where? b. What? c. How? d. Who? e. When?

QUESTION	*ANSWER*
9. Name 3 resources commonly found in most EMS systems.	a. BLS/ALS b. Fire personnel c. Police personnel d. Hospitals/Emergency Care Facilities e. *Instructor: At your discretion you can accept the following as well.* • HAZMAT • Rape Crisis • Burn Centers • Language Banks • National Guard Units
10. What is a tiered system? What are 4 of the more common tiers?	An EMS system with more than one level of response. Four common tiers include First responders, BLS, ALS and Air Ambulance/Aeromedical.
11. Name the two most common response modes.	a. Cold response b. Hot response
12. Describe what is meant by a "cold" response.	The ambulance responds without using lights or sirens as part of the normal traffic flow.
13. Describe what is meant by a "hot" response.	The ambulance responds using lights and sirens and is allowed special traffic privileges.
Module 1 Unit 2 Questions	
14. ________ means that you are ultimately responsible for your actions?	Liability
15. Who can be held liable?	The EMD and/or the Agency with which s/he works.

QUESTION		ANSWER
16.	Why are EMDs rarely found to be negligent?	Because they are trained according to the standards of care established for that community, which are set up to protect others against unreasonable risk or harm.
17.	Who generally is the primary defendant in court cases involving negligence?	The agency an EMD works for.
18.	When does the "duty to act" relationship begin?	As soon as the caller requests EMS assistance.
19.	Describe what is meant by the term "proximate cause."	That some action take by the defendant (EMD or Agency) caused an injury to the patient.
20.	Define "simple negligence."	Negligent conduct not purposeful or due to "malicious intent."
21.	Name 2 of the 4 methods used to establish a "standard of care."	a. Judge behavior in comparison to others with similar training and experience b. Judge behavior in comparison to local customs (protocols and guidelines) c. Judge behavior in comparison to local or state statutes, laws, ordinances or administrative orders d. Judge behavior in comparison to professional standards published by organizations involved in emergency work
22.	Describe the "emergency rule."	It means that someone who is acting in an emergency situation cannot be held to the same standard of conduct as someone not in that situation.
23.	What is the "principle of reasonableness?"	What a "reasonable person" would do in the same situation.

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QUESTION	ANSWER
24. List and describe the 2 type of damages that can be awarded.	a. *Compensatory* = repaying plaintiffs for money lost or "pain and suffering" b. *Punitive* = payments used to punish defendants
25. When can immunity be granted under the "Good Samaritan" laws?	a. Person acting in good faith b. Person acting in emergency
26. List or identify 3 things an EMD cannot reveal.	a. Patient names b. What was said in conversation with the caller c. Unusual behaviors not directly attributable to the medical condition (unless there is danger to the responders) d. Patient lifestyle e. Knowledge of patient HIV(+) status
27. What is meant by "governmental immunity?"	Immunity stemming from laws or statutes established locally or at the state level. Does not apply to EMDs in private agencies or to cases of "gross negligence."

QUESTION	*ANSWER*
28. List or describe 5 attributes or behaviors that EMDs should be concerned about.	a. Failure to send EMS resources when requested b. Subjective judgment of caller credibility c. Subjective judgment of caller chief complaint d. An argumentative or combative attitude (on behalf of EMD) e. Allowing prejudices to affect objective decision making (through prior dealing with the caller) f. Giving medical instruction without using locally approved EMDPRS g. Failure to train (or be certified) as an EMD h. Not giving instructions when needed or when a protocol exists for it
29. List, identify or describe 4 strategies used by individuals to avoid litigation.	a. Avoid inappropriate EMD behaviors b. Active participation in QA/QI and continuing education programs c. Seek/obtain certification as an EMD d. Follow policies/procedures/ practices used by your agency and community e. Report problems or problematic situations as soon as possible and in writing

QUESTION	ANSWER
30. Name the situations where "Good Samaritan" laws protect you from liability.	a. Person acting in emergency b. Person acting in "good faith" c. Persons not guilty of gross negligence or malicious misconduct toward a patient
31. ________ is defined as the "failure to act or perform in a particular situation as any other reasonable, prudent dispatcher (with similar experience/training) would in similar situations.	Negligence
32. Money awarded in a lawsuit is know as __________?	Damages
33. Name 3 of the 4 criteria that courts use in establishing negligence.	a. Duty b. Breach of Duty c. Injury/Damage d. Proximate Cause/Causation
34. What is meant by "breach of duty"?	That you did not perform your duty as established by acting according to the local "standard of care."
35. What are the two types of negligence?	a. Simple b. Gross

QUESTION	ANSWER
36. What is meant by "gross negligence?"	Negligent actions undertaken with the intent to cause harm ("malicious intent") and with disregard for the safety of persons and or property.
37. What is "abandonment?"	Leaving a patient known to be in a life-threatening condition, including starting medical treatment and then turning over treatment to someone with less medical training than yourself (with the end result being worsening of the patient's condition).
38. Describe what is meant by "foreseeability."	You cant' see what is happening at the scene, so you must rely on the information given to you by the caller. If a situation exists where the on-scene findings are different than those reported by callers then you are not liable.
39. Define "detrimental reliance."	When an action or service *does not happen* that a person claims was reasonable to rely on the agency to perform or provide, resulting in injury or worsening of the patient's condition.
40. Name the two types of consent.	a. Actual b. Implied
41. Define "Actual Consent."	Direct verbal or non-verbal communication to someone who is giving aid.
42. Define "Implied Consent. "	In situations where someone is unconscious or unable to respond, it is safe for us to assume that the person would want to be helped.

QUESTION	ANSWER
43. Name 3 inappropriate concerns that EMDs tend to have.	a. EMDs should be certified as EMD instructors b. EMDs should have advanced medical knowledge c. EMDs should relay confidential information to responding personnel d. EMDs should fear being sued for giving medical instructions. e. EMDs should fear telling callers that an ambulance is "on the way."
44. On what 2 levels can you employ strategies for avoiding liability?	a. Individual b. Agency
45. List and describe 5 strategies an agency can use to avoid liability.	a. Well-defined screening and hiring practices b. Use of a well-organized, well-written orientation and training program c. Regular/objective progress reports for probationary personnel d. Clearly defined job expectations and work descriptions e. Regular review and update of policies and procedures f. Provision of proper EMD training and certification g. Appropriate implementation of an EMD program

QUESTION	ANSWER
	h. Adequate EMD program management i. Use of a physician to provide medical direction for the program j. Establishing and use of a QA/QI program for dispatch k. Implement ongoing continuing education program l. Budgeting for QA/QI improvements
Module 1 Unit 3 Questions	
46. Name 4 of the 6 systems of the body.	a. Nervous system b. Circulatory system c. Respiratory d. Digestive System e. Musculoskeletal system f. Genito-Urinary system
47. Name the 3 subsystems of the nervous system.	a. Central nervous system b. Peripheral nervous system c. Autonomic nervous system
48. Name the 2 parts of the central nervous system.	a. Brain b. Spinal cord
49. Name the 2 types of nerves found in the peripheral nervous system.	a. Motor nerves b. Sensory nerves

QUESTION	ANSWER
50. Name the parts of the autonomic nervous system.	a. Uses motor nerves like peripheral nervous system
51. What does the autonomic nervous system control (name 3)?	a. Heartbeat b. Force of the heart's contractions c. Blood vessel diameter d. Bronchial diameter e. Pupillary action (pupils)
52. Name 3 of the 5 major parts of the circulatory system.	a. Heart b. Arteries c. Veins d. Capillaries e. Blood
53. There are 10 parts to the respiratory system, name 5.	a. Pharynx b. Epiglottis c. Larynx d. Trachea e. Bronchi f. Lungs g. Bronchioles h. Alveoli i. Diaphragm/rib muscles j. Pleura

QUESTION	ANSWER
54. The digestive system has 13 major parts, name 7.	a. Mouth b. Throat c. Esophagus d. Stomach e. Small intestine f. Large intestine g. Liver h. Gall bladder i. Pancreas j. Appendix k. Spleen l. Rectum m. Anus
55. What is the purpose of the musculoskeletal system?	a. Supports body b. Provides movement c. Protects vital organs d. Bones make and destroy blood cells

QUESTION	ANSWER
56. What are the 3 components of the musculoskeletal system?	a. Muscles b. Bones c. Connective tissues (ligaments and tendons)
57. There are 6 parts to the musculoskeletal system, name 4.	a. Head b. Vertebral column c. Chest d. Upper extremities e. Pelvis f. Lower extremities
58. Name 3 of the 4 parts of the upper extremity.	a. Shoulder girdle b. Arm c. Forearm d. Hand
59. Name 2 of the 3 parts of the lower extremity.	a. Upper leg b. Lower leg c. Foot
60. Name the parts of the hand.	a. Carpal b. Metacarpals c. Phalanges

QUESTION	ANSWER
61. How many bones are there in the spinal column?	Thirty-three
62. Name the 3 types of bones in the foot.	a. Tarsals b. Metatarsals c. Phalanges
63. Name the 3 types of muscles.	a. Voluntary b. Involuntary c. Cardiac
64. What do tendons do?	Connect muscles to bones
65. What do ligaments do?	Connect bones to other bones
66. What are 2 of the 4 parts of the genito-urinary system that are common to both men and women?	a. Kidneys b. Ureters c. Urinary bladder (bladder) d. Urethra
67. Name 3 of the 4 parts of the female reproductive system.	a. Fallopian tubes b. Ovaries c. Uterus d. Vagina
68. Name 2 of the 3 parts of the male reproductive system.	a. Testes b. Scrotum c. Penis

QUESTION	ANSWER
69. Name 3 time-sensitive criteria used to determine dispatch criteria (what does the medical director use to establish dispatch types?)	a. Consciousness b. Shock c. Respiratory distress
70. Name the 4 levels of consciousness (descriptions are acceptable at the instructor's discretion).	a. Alert b. Verbal c. Pain d. Unresponsive
71. What are 3 questions you can use to determine the level of a patient's consciousness?	a. Is the patient awake? b. Have you tried to wake them up? c. Can they talk to you?
72. What is shock?	It is defined as the "lack of tissue perfusion." It simply means that there is a lack of circulation throughout the body, particularly to the heart, lungs, kidneys and brain.

QUESTION	*ANSWER*
73. Name 5 of the 7 symptoms of shock.	a. Feeling of "impending doom"
	b. Weakness
	c. Nausea
	d. Thirst
	e. Dizziness
	f. Coolness
	g. Restlessness/anxiety
74. Name 5 of the 7 signs of shock.	a. Pale/cool/moist skin
	b. Shallow/rapid breathing
	c. Dull/lackluster eyes or dilated pupils
	d. Decreasing levels of consciousness
	e. Fluid loss from bleeding, vomiting or diarrhea
	f. Weak/"thready" pulse
	g. Steady drop in blood pressure

QUESTION	*ANSWER*
75. Name 5 types of shock.	a. Anaphylactic b. Cardiogenic c. Hemorrhagic d. Hypovolemic e. Neurogenic f. Psychogenic g. Septic
76. List, describe or identify 6 things you can tell callers to do for persons going into shock.	a. DO NOT GIVE THEM ANYTHING TO EAT OR DRINK! b. Make sure the patient's airway is clear so they can breathe. c. Control bleeding (if external) by the use of direct pressure. d. Calm and reassure the patient. e. Lay patient on side (preferably left-side) or allow them to remain in a position that is most comfortable, unless they are trauma patients. f. DO NOT MOVE TRAUMA PATIENTS!!!! g. Keep the patient warm and prevent the loss of body heat by covering the patient with something.

QUESTION	ANSWER
77. List, describe or identify 5 of the 6 symptoms of respiratory distress.	a. Anxiety/restlessness b. Cyanosis (turning blue) c. Rapid breathing (tachypnea) d. Noisy respiration e. Labored appearance (looks like they are working hard) f. Sweaty (diaphoretic)
78. Describe the role of platelets in clotting.	Blood platelets go to the wound and break down to block the hole.
79. What is the most effective way to stop bleeding?	Direct pressure
80. What should callers do when bandages become soaked with blood?	Apply more clean bandages and do not remove the old ones.
81. What do you do about tourniquets?	Tell caller not to apply them. However, if the caller says one has already been applied then tell them to leave it on.
82. Describe the difference between a bleeding artery and a bleeding vein.	a. Artery bleeds with spurts of bright red blood b. Vein bleeds in an oozing/pulsing fashion with dark red blood
83. What is the purpose of arteries?	To carry blood from the heart to the rest of the body

QUESTION	ANSWER
84. What do veins do?	Carry blood back to the heart after it has dropped its oxygen payload and picked up waste products from cells
85. What is the difference between a (cardiac arrest) heart attack and a myocardial infarction?	Heart attack is the cessation of heart functions, while a myocardial infarction is the actual death of a part of the heart muscle due to a lack of oxygen. *A heart attack is the end result of a MI.*
86. What is the difference between a sign and a symptom?	a. Sign is something a rescuer can see, hear feel, touch, smell or taste. b. Symptom is something that patients express about themselves (like "I'm hot/cold," "My chest hurts," etc.)

MODULE 2
Information Gathering and Dispatch

TRAINEE TEXT

MODULE OVERVIEW

Effective Emergency Medical Dispatch requires that you be able to successfully obtain information from callers, allocate and dispatch resources and, finally, be prepared to provide effective emergency care instructions.

Module 2, Information Gathering and Dispatch, presents information and methodology for eliciting required information from callers. It also provides training for resource allocation. Finally, there is a unit developed to help you understand how to properly provide the emergency care instructions found on the locally approved Emergency Medical Dispatch Protocol Reference System (EMDPRS).

Module 2 contains the following Units:

Unit 1: *Obtaining Information from Callers*

Unit 2: *Resource Allocation*

Unit 3: *Providing Emergency Care Instructions*

MODULE OBJECTIVES

Upon completion of this module, you will be able to:

1. Describe the philosophy of Emergency Medical Dispatch call taking.
2. Describe the techniques for obtaining information from callers.
3. Describe the local EMS system.
4. Describe how to properly allocate resources.

INSTRUCTOR NOTES

<TG PAGE 2-1>

Introduce the module.

List the three units in this module for the trainees.

Review the Module Objective(s).

TRAINEE TEXT

5. Describe the proper ways to provide emergency care instructions.

MODULE DURATION

Approximately 8 hours.

INSTRUCTOR NOTES

For instructor information only.

MODULE 2
Unit 1 Instructor Preparation

Following are a list of questions and/or topics which appear in Unit 1, for trainees to answer and discuss. Although information is provided in the Trainee Guide and Instructor Guide, you should be prepared to discuss these questions/topics and give additional information and examples, based on local agency guidelines and your experience. Audio and video tapes would be great to use in this unit.

1. Discuss how to deal with simultaneous emergencies.
2. Discuss how to deal with confusing information.
3. Discuss how to deal with insufficient information.
4. Discuss how to deal with hysterical/distraught callers.
5. Discuss how to deal with trauma cases.
6. Discuss local policies for how to deal with a Dead on Arrival.
7. Discuss how to deal with callers whose primary language is not English.
8. Discuss how to deal with speech and hearing impaired callers.
9. Discuss local TDD policies. (You may want to develop handouts on this.)
10. Discuss how to deal with children callers.
11. Discuss and practice how to obtain information from callers. (You will need to develop caller-scripts which are appropriate for your local agency.)
12. Discuss the importance of getting a "call-back" number and verifying the address of the caller and patient location.
13. Be sure to stress the importance of asking questions in the sequence they appear. It is very important that trainees get "Where" information (including a "call-back" number) first. It doesn't matter that they have ANI-ALI monitors or #9-1-1. These can be wrong, so it is important to verify addresses and get a "call-back" number.
14. You need to research and be able to discuss the local agency's policies on how to close a call. This information is not in the Trainee Guide. You will need to provide this information.

Module 2 - Unit 1
Obtaining Information from Callers

TRAINEE TEXT

UNIT OVERVIEW

Dealing with difficult callers by sending resources out and having them determine problems is not acceptable behavior. One of the most important parts of your job is obtaining information from callers in order to determine emergency medical needs.

Unit 1, Obtaining Information from Callers, identifies the philosophy of Emergency Medical Dispatch and your responsibilities when dealing with callers. It also points out the interpersonal qualities that must be brought to each call and provides a series of events that you can predict will happen with each real emergency. This unit also shows the correct method of doing the initial caller assessment and the proper order that information should be taken from callers. How to calm hysterical callers in order to get that information is also presented.

UNIT OBJECTIVES

Unit Learning Objectives

Upon completion of this unit, you will be able to:

1. Describe the philosophy of Emergency Medical Dispatch call taking.
2. Describe the techniques for obtaining information from callers.

Enabling Learning Objectives

To meet the unit learning objectives, you will:

1.1 List the primary responsibilities of the EMD when call taking.

INSTRUCTOR NOTES

<TG PAGE 2-3>

Introduce the unit.

State the unit learning objective(s).

TRAINEE TEXT	INSTRUCTOR NOTES
1.2 Describe the interpersonal qualities and attitude that the EMD is required to show at each call.	
2.1 List in order of priority the four essential items of information that the EMD must obtain from each caller who requests EMS assistance.	**<TG PAGE 2-4>**
2.2 Given simulated calls, and using local reporting forms, accurately obtain and record essential information from callers in the correct priority sequence.	

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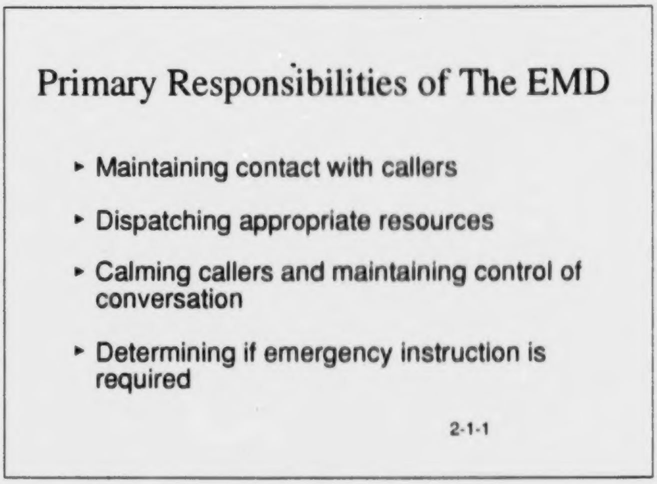
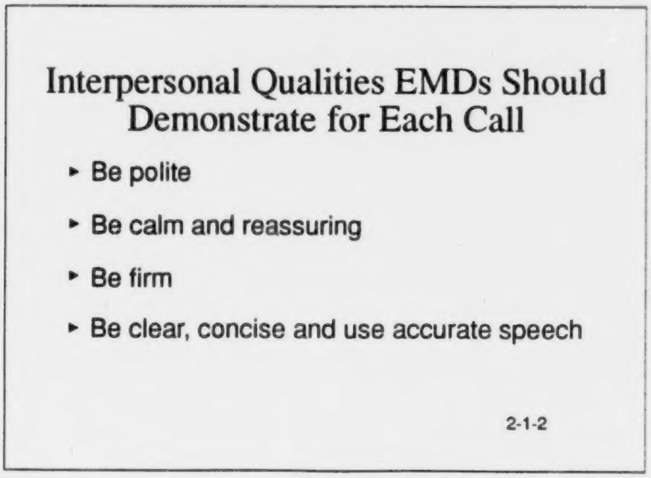
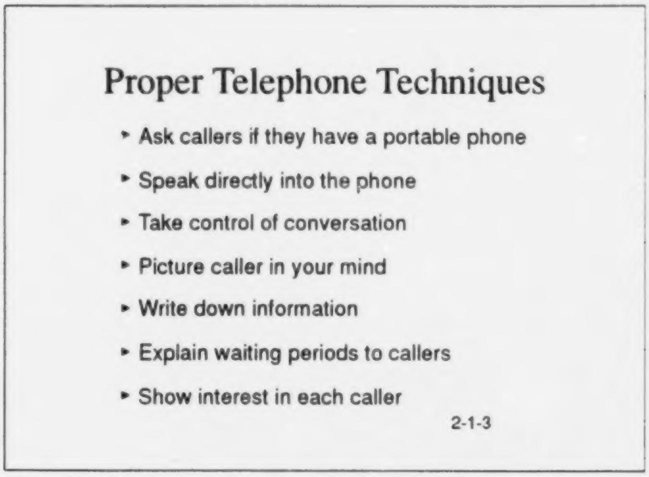
TRAINEE TEXT	INSTRUCTOR NOTES
THE PHILOSOPHY OF EMD	**<TG PAGE 2-5>**
EMDs have many responsibilities. In addition to learning about the basics of EMD and getting the medical knowledge required for successful Emergency Medical Dispatch, it is important that you learn about the other responsibilities that you will have. One way to do this is to learn and understand the basic philosophy of Emergency Medical Dispatch. This philosophy includes learning the basic responsibilities of an EMD, the interpersonal qualities that must be shown at each call, attitude and proper ways to use the telephone.	
Basic EMD Philosophy	
Four Primary EMD Responsibilities in Call Taking. The EMD has many responsibilities. Some of these were described in Module 1, Unit 1. Of these, the following four are considered to be the key responsibilities of the EMD.	**Show** Figure 2-1-1. **Review** the four primary EMD responsibilities when call taking.
1) *The EMD is responsible for maintaining contact with the caller.* It is up to you to keep the caller on the line until you get the information you need to make a dispatch decision.	1. Maintain contact.
2) *The EMD is responsible for dispatching the appropriate units.* While you may think this is obvious, it still is very important. Once you have the information needed to dispatch, you need to initiate the dispatch. What you need to dispatch is determined by the EMDPRS and the responses you get from the caller.	2. Dispatch appropriate units.

TRAINEE TEXT	INSTRUCTOR NOTES
3) *The EMD must keep the caller calm and maintain control of the conversation.* In other words, if you can't calm the caller and keep them under control, you won't be able to get the information you need to make good dispatch decisions.	**<TG PAGE 2-6>** 3. Calm callers and maintain control.
4) *The EMD must determine if emergency care instructions are required.* Simply, you must decide if there is a need for you to use a scripted medical protocol like CPR or Mouth-to-Mouth Resuscitation. This decision is determined by your locally approved EMDPRS. The EMDPRS will tell you when you need to give emergency care instructions.	4. Determine need for medical instructions.
Primary Responsibilities of The EMD ▸ Maintaining contact with callers ▸ Dispatching appropriate resources ▸ Calming callers and maintaining control of conversation ▸ Determining if emergency instruction is required 2-1-1	
Four Interpersonal Qualities You Should Display During Every Call. Every caller you speak to should be treated professionally, regardless of the personal demeanor or any experience that you may have with them. There are four qualities that you need to display for EVERY caller.	**<TG PAGE 2-7>** **Show** Figure 2-1-2. **Review** the four interpersonal qualities that should be displayed at every call.

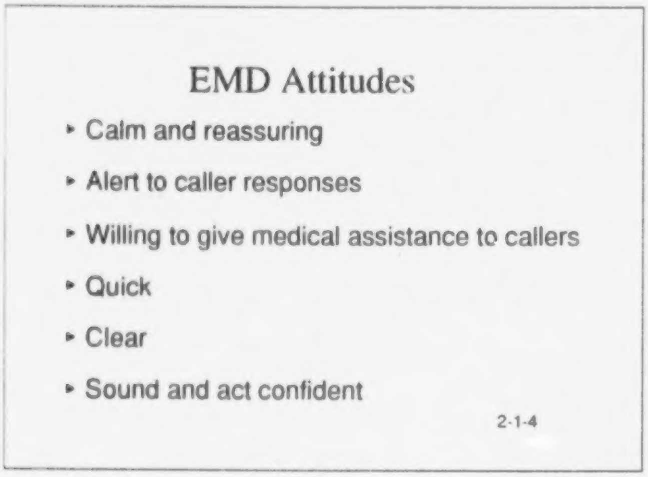
TRAINEE TEXT	INSTRUCTOR NOTES
1) *Be polite.* Treat every caller with respect and courtesy.	1. Be polite.
2) *Be calm and reassuring.* You need to calm the caller in order to get the information you need to make dispatch decisions. Reassuring them that you want to help them can help you calm them and keep them calm.	2. Be calm and reassuring.
3) *Be firm.* You need to maintain control of the call. The best way to deal with difficult callers is to handle them firmly. Just be careful not to become impolite in the process.	3. Be firm.
4) *Be clear, concise and use accurate speech.* Don't confuse callers by using jargon or difficult terms. Try to speak in a clear voice (so the caller can hear every word). Try to keep your questions, comments, etc. short and to the point. If you dispatch units to respond, tell the caller that help is on the way and will be there soon, don't just tell the caller "they're on the way." However, do this ONLY after you have dispatched assistance to the caller.	4. Be clear, accurate and concise.
 Interpersonal Qualities EMDs Should Demonstrate for Each Call ▸ Be polite ▸ Be calm and reassuring ▸ Be firm ▸ Be clear, concise and use accurate speech 2-1-2	**<TG PAGE 2-8>**

TRAINEE TEXT	INSTRUCTOR NOTES
Proper Telephone Techniques. When you are on the phone with callers, you are in one of the most difficult situations that you will face. Proper use of the telephone helps you better deal with this situation. Below are some telephone techniques that you can use. Using them will make your job easier.	**Show** Figure 2-1-3. **Review** telephone techniques that will help EMDs deal with callers and the situation.
1) *Ask the caller if they have a cordless phone.* Have them get the phone as close to the patient as possible. Have them use a cordless phone if one is available.	1. Ask caller if they have a cordless phone.
2) *Speak directly into the mouthpiece.* The caller can hear you better and you won't have to repeat yourself as much. Maintain a calm tone of voice, even when callers don't understand you. Don't speak louder!	2. Speak directly into the mouthpiece.
3) *Take control of the conversation.* Don't let callers ramble. Direct and focus their attention to answering your questions. Otherwise you waste precious time.	3. Take control of the conversation.
4) *Picture the caller in your mind.* Trying to imagine what is happening at the scene will help you better deal with the caller. It helps to personalize the call.	**<TG PAGE 2-9>** 4. Picture the caller in your mind.
5) *Document information callers give you.* Note what callers are saying. This way you can relay it to responding units if it is necessary.	5. Write down/document caller information.

TRAINEE TEXT	INSTRUCTOR NOTES
6) *Explain waiting periods to callers.* Callers who are waiting for your help are very anxious to begin with. Long periods of silence exaggerate their feelings of fear. Explaining waiting periods helps to prevent or slow the effects of a phenomenon known as "telescoping of time" where things seem to be taking longer than they really are.	6. Explain waiting periods.
7) *Show interest in each caller.* Treat them as you would your own family. Ask for the caller's name and use it frequently and repeatedly during your conversation. This keeps callers focused and is likely to help calm them. Personalizing the call in this way also helps callers realize that you are concerned and want to do what's best for them and the person they are calling about.	7. Show genuine interest in the caller. **Tell** trainees that getting the caller's name is very important and tell them why.
 Proper Telephone Techniques ▸ Ask callers if they have a portable phone ▸ Speak directly into the phone ▸ Take control of conversation ▸ Picture caller in your mind ▸ Write down information ▸ Explain waiting periods to callers ▸ Show interest in each caller 2-1-3	**<TG PAGE 2-10>**

TRAINEE TEXT	INSTRUCTOR NOTES
Your Attitude. Following is a discussion about the attitude that you will need to display during each call. Having the proper attitude helps you deal with the people who request your assistance.	**Show** Figure 2-1-4. **Describe** proper EMD attitude that helps the EMD deal with callers.
1) *You need to be calm and reassuring.* Remember it is your job to calm and reassure the caller, especially in cardiac cases. If you aren't calm then the caller won't be either. Also, let the caller know you've done something to help them ("I've dispatched the ambulance and they're on the way...").	1. Be calm and reassuring
2) *Be alert to caller responses.* Listen carefully to what the caller tells you and write the responses.	2. Be alert.
3) *Be willing to give medical instruction to callers.* The medical information and training you receive in this course is designed to help patients, not hurt them.	3. Be willing to give instructions.
4) *You need to be quick.* You need to quickly determine the location of the patient/caller and nature of the emergency being reported. Ask one question at a time and record the answer. Only repeat a question if a caller hasn't understood you or has not provided the information you need to answer your question. Use the questions contained in your protocol. This does not mean you cannot ask additional questions, provided they do not delay dispatch.	**<TG PAGE 2-11>** 4. Be quick.
5) *You need to be clear.* Speak slowly and clearly so that you don't have to repeat instructions or questions.	5. Be clear.

TRAINEE TEXT	INSTRUCTOR NOTES
6) *Act and sound confident.* Your confidence reassures callers and increases the likelihood that the caller will follow your instructions.	6. Act/sound confident.



EMD Attitudes

- Calm and reassuring
- Alert to caller responses
- Willing to give medical assistance to callers
- Quick
- Clear
- Sound and act confident

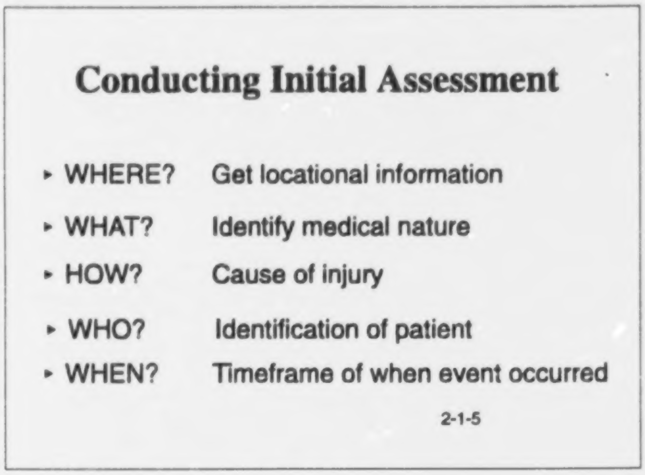
2-1-4

TRAINEE TEXT	INSTRUCTOR NOTES
Eliciting and Recording Information/ Conducting the Initial Assessment	**<TG PAGE 2-12>**
Asking the right questions, in the right way, getting the right responses and documenting them are some of the most important parts of your job. Experience has shown that using the EMDPRS is a more reliable method for obtaining the information you need to make a dispatch decision than simply asking the caller what is wrong.	**Show** Figure 2-1-5. **Tell** trainees it is very important to get the proper information, in the right way, by using the initial survey or interrogation protocols found in their EMDPRS.
Conducting the initial assessment is done the same way, every time. The procedures and questions you use are given to you in your EMDPRS, but the following information should always be gathered in the sequence presented here. Gathering and recording this information is the "initial assessment." The proper order that information should be gathered is Where, What, How, Who and When. *This order is very important.*	**Tell** trainees that initial surveys must be conducted the same way every time! **Review** the proper order of information gathering. *Order is very important.*
Where? *Get the address first.* You need to find out where the incident happened (or is happening). This way you know where to send units and can help them get there efficiently. ***Do this even if you are using an E9-1-1 or CAD (computer aided dispatch) terminal.*** You need a means of verifying patient and caller locations. This is important in case you and the caller get disconnected and you can't reestablish contact. At least you'll be able to get ***some*** help out to the patient. *Get the phone number (aka "call-back number).* This way you can call back should you and the caller be disconnected.	1. Where? - Get caller and patient location information; describe 9-1-1 enhanced systems; this is the most important thing to do because if you lose contact with the caller, you will at least be able to send out some help. Remind trainees that this order is very important. They **must** verify the address of the caller and patient and get the call-back number. If they lose contact and can't reestablish it, they could at least dispatch something.

TRAINEE TEXT	INSTRUCTOR NOTES
NOTE: On some 9-1-1 enhanced systems (9-1-1-E) the address and phone number of the caller is automatically supplied. You must confirm that this information is correct.	
What? Find out what the *chief complaint* is and the nature of the problem. Get information about what has happened and what response is needed. At this point you will also *determine the level of consciousness* ("Is the person awake?", "Can the person answer questions?", etc.) and *determine breathing status* (looking for respiratory distress and cardiac arrest). It is at this point that you must take control of the call and do not let the caller ramble.	**<TG PAGE 2-13>** 2. What? - Find out chief complaint; also get a level of consciousness and breathing status.
How? Obtaining this type of information is generally optional, and is frequently offered directly by the caller ("My friend was shot," "He stabbed me," "My friend got stung by a bee and now I can't wake him up"). However, it may be included in the questioning sequence of your EMDPRS. Knowing how an injury occurred (sometimes referred to as the "mechanism of injury") can provide some valuable insight into the response required, even scene safety issues.	3. How? - Refers to the mechanism of injury or source of illness; frequently offered by the caller; may be includedin questioning sequence of the EMDPRS.
Who? This information is generally optional. Here you get information about who the caller is and who needs help. This information can be useful in helping you modify your dispatches (only if the EMDPRS says to based on this information) and can be useful for the responder you dispatched.	4. Who? - Generally optional; may help EMD determine or modify dispatched responses as based on the EMDPRS.
When? Get information about how long ago the incident happened. This information also can help you modify the response and can be useful to responding personnel.	5. When? - Usually optional; can help modify response and be useful to respondent.

TRAINEE TEXT	INSTRUCTOR NOTES

<TG PAGE 2-14>



Conducting Initial Assessment

▸ WHERE?	Get locational information
▸ WHAT?	Identify medical nature
▸ HOW?	Cause of injury
▸ WHO?	Identification of patient
▸ WHEN?	Timeframe of when event occurred

2-1-5

Calming Callers

A person who makes a call for emergency medical assistance may be upset and anxious. It may be difficult to elicit information from an hysterical caller. Therefore, it is best for all people involved that you be able to calm the caller. There are techniques that you can use to calm these callers.

Tell trainees that it's very important to calm callers in order to get good information.

Calming Techniques and The Hysteria Threshold. There is a phenomenon that occurs with emergency situations that you need to understand. It is commonly referred to as "The Hysteria Threshold." The hysteria threshold is defined as *"the caller's emotional state that prevents them from being focused in the interrogation process."* Simply put the hysteria threshold is when the caller reaches a point that s/he is too upset to properly focus on your questions and therefore cannot give you the responses you need to make your dispatch decisions.

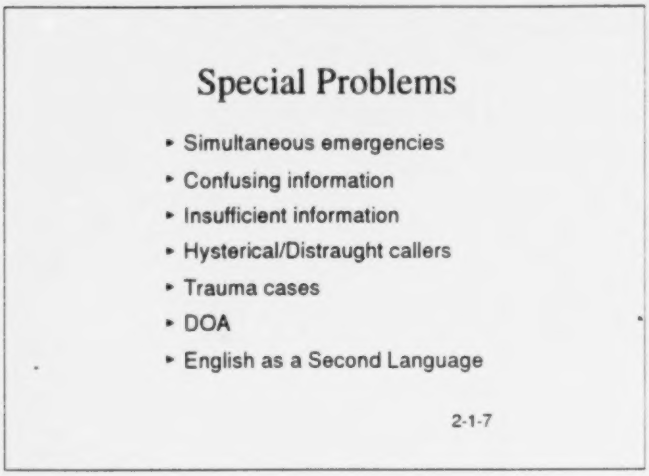
Show Figure 2-1-6.

Review the **"hysteria threshold"** and the calming techniques for it.

TRAINEE TEXT	INSTRUCTOR NOTES
Until you can break through a caller's threshold, there is no way you can control the call. The most effective way to break through the hysteria threshold is through the use of a techniques know as *"repetitive persistence."* Repetitive persistence *"is a command or request from the EMD to the caller, accompanied by a reason for the request. The request or the reason is repeated verbatim until the request or action is carried out by the caller."*	**<TG PAGE 2-15>** **Describe** "repetitive persistence." You may want to demonstrate it.
Other ways to control the hysteria threshold are by using the medically approved interrogation protocols found in your EMDPRS and using your professional dispatch skills (professional demeanor makes callers more comfortable with you). Be sure to ask for and use the caller's name throughout the duration of the call. Far and away, the most effective methods are a calm tone of voice and a calm demeanor.	**Review** these additional techniques.
Calming Callers ▸ Hysteria Threshold ▸ Calming Techniques · "Repetitive Persistence" · EMDPRS protocols and questions · Professional dispatch skills/demeanor · Calm voice/acting calm 2-1-6	
NOTE: It is important that you remember that most calls you receive are not life-threatening.	**Tell** trainees that most calls aren't life-threatening. This may calm the trainees!

TRAINEE TEXT	INSTRUCTOR NOTES
	Discuss closing the call. You need to have local policies on hand and be ready to discuss them.
Special Problems. In the course of your career as an EMD, you will run into several situations that are particularly difficult to deal with or pose unique problems. Several of these situations are described below. Methods for dealing with them are also provided.	**<TG PAGE 2-16>** **Show** Figure 2-1-7. **Briefly review** these special problems and ways to deal with them. You may want to ask trainees how they could deal (or have dealt with) with these situations.
1) *Simultaneous emergencies.* There will be times when you will get more than one emergency call at a time. In this type of situation, it is best to take good notes and prioritize calls in terms of medical urgency (according to your EMDPRS).	1. Simultaneous emergencies and how to deal with them.
2) *Confusing information*. To combat this, write down all information. If you become confused, repeat the information you have to the caller for them to verify. Remember to get a "call back" number in case you need to further verify locational information, and get the address of the incident, not of the caller. (Make sure you let the caller know you need to know where the victim is!)	2. Confusing information and how to deal with it.
3) *Insufficient information.* If after dealing with a caller, you find that you don't have enough information, or the responding personnel need further information, then you need to be able to reach the caller, so get a "call back" number (taken care of in some enhanced 9-1-1 phone systems). Using the EMDPRS interrogation procedures will also help prevent this.	3. Insufficient information and how to deal with it.

TRAINEE TEXT	INSTRUCTOR NOTES
	<TG PAGE 2-17>
4) *Hysterical/distraught callers.* These can be the most challenging calls. Remember the procedures you just learned for controlling the hysterical caller. Be firm and courteous and get the caller's attention. If possible, ask to speak to someone else. Be sure you tell the caller to stay on the line until you say it is okay to hang up. You will find that callers' emotional states will generally improve once you start giving them medical instruction.	4. Hysterical/distraught callers and ways to deal with them.
5) *Trauma cases.* USE EXTREME CAUTION. Additional movement of the victim may cause further injury.	5. Trauma cases and dealing with them.
6) *Dead On Arrival (DOA).* Different regions have different policies regarding DOA's. Check with you local medical control about your policies.	6. DOAs and how to deal with callers reporting them. Tell trainees they need to check local policies (unless all of your trainees are from the same agency. . . in which case you should find out the DOA policies and relay it to them).
7) *English as a second language.* Callers whose primary language is not English, or those with a poor command of the language, may not be able to respond properly to instructions. Judgment on a caller's ability to follow instructions can be determined during the interrogation process. In most places, access to language translator services are available (like that available from AT&T). If you are in doubt about caller responses, however, it is best to send a response higher than you can prove is necessary based on the information you have from the caller. **Refer to your local guidelines.**	7. ESL and how to deal with it.

TRAINEE TEXT	INSTRUCTOR NOTES
 Special Problems ▸ Simultaneous emergencies ▸ Confusing information ▸ Insufficient information ▸ Hysterical/Distraught callers ▸ Trauma cases ▸ DOA ▸ English as a Second Language 2-1-7	**<TG PAGE 2-18>**
Speech/Hearing Impaired Callers. Make every effort to assist these callers and remember that call times are greater with persons having these disabilities. It is important that you respond with patience due to the problems that you may encounter in communicating with these callers.	**Show** Figure 2-1-8. **Discuss** dealing with speech and hearing impaired callers. Solicit input from trainees about other ways they may know to deal with this type of call.
Remember, the caller will probably be in a higher state of anxiety than you. Also keep in mind that these people usually don't deal with people outside of their own communities, so they may not know how to effectively communicate with you.	1. Callers are more anxious.
Impaired persons may not frequently deal with persons outside of the deaf community. Therefore they might be reluctant to request emergency services and wait longer to ask for help. In this situation, the request becomes more urgent.	2. Callers may not frequently deal with persons outside their community, so they may be reluctant to request help.

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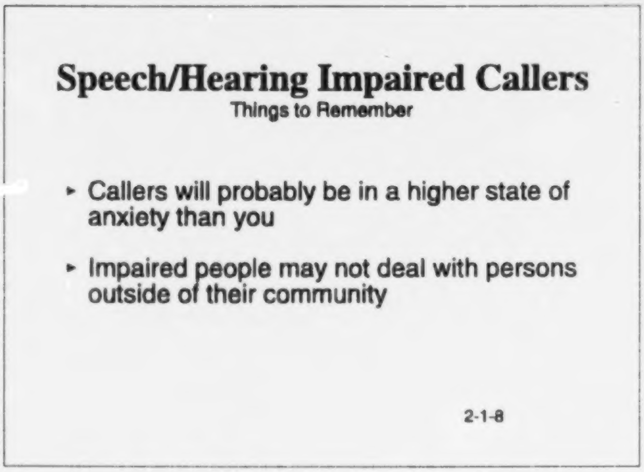
TRAINEE TEXT	INSTRUCTOR NOTES
 **Speech/Hearing Impaired Callers** Things to Remember ▸ Callers will probably be in a higher state of anxiety than you ▸ Impaired people may not deal with persons outside of their community 2-1-8	**<TG PAGE 2-19>** **Show** Figure 2-1-9.
If a caller is deaf, he or she may not realize when help has arrived. It is critical that you stay on the line with them until help has arrived and provide them with continuous updates. It may also become necessary for you to interpret for the responders. Actual protocols to follow will be set by your local agency.	3. Callers may not realize when help has arrived.
Speak slowly and clearly to callers who have difficulty hearing. DO NOT TALK DOWN TO THEM. They are *able* to understand what you tell or ask them, they just can't *hear* you very well.	4. Speak slowly to the hearing impaired, not down at them; they aren't dumb, they just have a hard time hearing.
If you receive a call and you cannot understand the caller very well, do not assume that person is intoxicated. The caller may have a speech impediment, be suffering a stroke or could be a diabetic with low blood sugar. Ask them to slow down and remain patient. Tell them you will remain on the line with them for as long as it takes to get them the appropriate response. You may want to repeat what you hear to them, so they can tell you if it is correct.	5. If you can't understand the caller, don't assume they are intoxicated.

TRAINEE TEXT

Speech/Hearing Impaired Callers

Things to Remember continued...

- If the caller is deaf, s/he may not realize when help has arrived
- Speak slowly and clearly to callers who have difficulty hearing
- If you receive a call and cannot understand the caller, DO NOT ASSUME THE CALLER IS INTOXICATED!

2-1-9

NOTE: Review the local TDD call procedures and policies with your instructor. He or she will discuss your local policies at this point in the course. Feel free to ask them questions.

The Americans With Disabilities Act. By requirement of the Americans with Disabilities Act of 1990, as of January 26, 1992, all public entities providing emergency telephone services have been required to be accessible to persons with severe speech or hearing disabilities.

Children Callers. Most of the calls you will handle as a dispatcher will be from adults concerning adults. Children are involved in only a small number of EMS runs. It is not known how often EMD calls are made by children as callers. However, as both caller and victim children's medical complaints are specific and different issues from adults'. Criteria-based dispatch and pre-arrival instructions derived from and designed for adult symptoms and conditions may not match well with the underlying causes of those symptoms in children. One

INSTRUCTOR NOTES

<TG PAGE 2-20>

Review TDD policies with trainees. You may want to develop handouts for them to review, especially in cases where your trainees are from multiple agencies.

Tell trainees that the ADA requires all public entities be accessible (via telephone) to those with hearing and speech problems.

Describe how to deal with children callers. Tell trainees that this group of callers requires special handling, then review the methods listed here. If trainees have any additional techniques or concerns, be sure to ask for and address them.

TRAINEE TEXT	INSTRUCTOR NOTES

example is that, in children, chest pain or fainting are rarely due to a primary heart problem.

<TG PAGE 2-21>

Injury is the most common cause for both adults and children to place calls for 9-1-1 assistance. They make up from one-half to two-thirds of all pediatric ambulance runs. Although meningitis, dehydration and other causes of medical shock are common reasons for children to be brought to an emergency room, children with these problems are more often brought by lay transportation or from the pediatrician's office without calling for EMS assistance. Respiratory distress and seizures make up the other half of calls for assistance for children.

It can be difficult to tell whether a child is having an emergency or not. The younger the child, the more vague or nonspecific may be the signs of illness; irritability, crying, vomiting, fever and lethargy are symptoms that may accompany a wide range of pediatric conditions; many trivial, some life-threatening. For instance, while chest pain, collapse, and loss of consciousness are the common adult medical complaints that are considered potentially life-threatening, the pediatric complaints are likely to be "sick," "fever," "unresponsive," "choking," "seizing" or "hurt".

Behind the complaint "something is wrong with my child" ("sick, hurt, crying") may be an unsuspected foreign body in the esophagus, meningitis, child abuse or simply an ear infection. Behind the complaint, "my baby had a spell where he was blue, pale, not breathing, unresponsive..." may be something as simple as regurgitation or as complex as seizure, heart rhythm disturbance, apnea or septic shock. Because a child's symptoms are often nonspecific, even an experienced pediatric provider will have difficulty discriminating between these conditions in person, let alone over the phone.

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Most of the calls you receive concerning children will be from their parents or other caregivers. Although parents are discerning and detailed observers of their children, they are not often medically trained. Furthermore, parents are emotionally entangled in their child's condition in ways that limit their abilities as EMS providers. Whether or not they have contributed to their child's condition, parents are likely to feel guilty and may also feel angry, frightened or powerless by what is happening to their child.

<TG PAGE 2-22>

Because of this, getting information and providing instructions may be difficult. Your ability to provide calm and clear instructions will make it much easier to get information, particularly if your questions are framed within the context of providing the help they seek. In an emergency, questions can be best posed in the context of providing what they need and telling them how they can help, in a calm fashion. "I am sending help, and I will stay with you until help arrives. Listen carefully, you can help by telling me....." The toddler or child's level of activity can sometimes be the most helpful gauge on the urgency of the situation. Asking "How is the child now?" or "What is the child doing now?" can help the parent give you a better picture of what is happening at the moment.

All of these considerations contribute to the difficulty of telling whether a child is having an emergency or not. Because of these considerations, over-triage is a standard strategy practiced by pediatricians, nurse practitioners and family practitioners. Triage of pediatric patients by EMD should reflect this understanding.

Critically ill or injured children benefit from receiving care at facilities with specialized resources for caring for children. These facilities may not be the nearest hospital to the site of injury, therefore consideration for developing and supporting a system of care for children that gets the injured or ill child to the right facility as quickly as possible should be built into dispatch protocols and may involve factors such as helicopter or

TRAINEE TEXT	INSTRUCTOR NOTES

fixed wing transport and pre-existing triage and transfer agreements, both intra and interstate.

Finally, providing emergency care for children can be distressing even for the most experienced of EMS personnel, particularly if the outcome of the crisis is poor. Critical incident stress management for such events is increasingly acknowledged to be of great help.

There will be times when you get a call from a child. Below are a few special things to consider when dealing with children callers.

<TG PAGE 2-23>

1) Children, when faced with a crisis, often appear to be very calm; this is because they generally do not understand the gravity of the situation. Remember, you should not judge the severity of the call by the level of emotion expressed by the caller.

2) Children often will report "something is wrong with my..." or "...is sick and needs help."

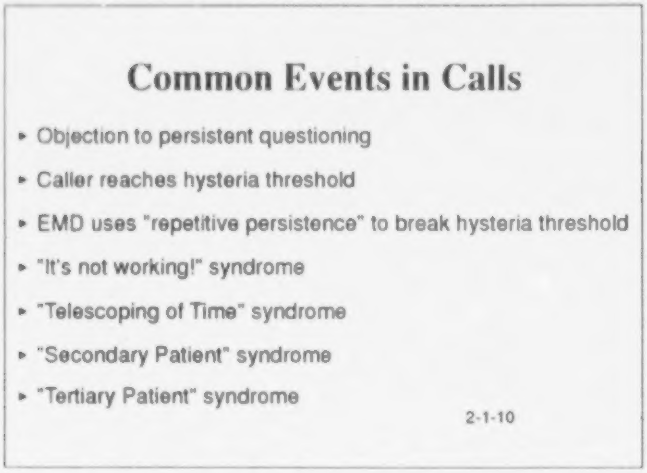
3) Children will commonly refer to someone who is unconscious as "it looks like...is asleep" or "...is sleeping and I can't wake them"; assume this is an unconscious patient.

4) Children are very capable of answering questions and following instructions. You just have to ask them one-at-a-time so you don't confuse the caller. It may be necessary to repeat and rephrase your questions in order to simplify it for the child ***and*** to be sure the child is not answering "yes" out of reflex to an authority figure.

5) Children callers often get anxious or nervous when it seems to be taking too long for an ambulance to arrive. You have to continually reassure them that help is coming.

TRAINEE TEXT	INSTRUCTOR NOTES
6) If distressed, the child's anxiety may relate to concern about who will take care of them or fear that they might be responsible for the crisis. Remember to reassure them that they will be taken care of and to praise them for their help in making the right call.	
7) In non-English speaking families, the school-aged child may be the most fluent in English and may have been chosen to be the translator. Always ask if there are any other adults present.	**<TG PAGE 2-24>**
Common Sequence of Events. There is a common sequence of events that you will face when dealing with callers. This sequence is listed and described below. All of these can be overcome using repetitive persistence and the other techniques you have learned up to this point.	**Show** Figure 2-1-10 **Describe** this common event sequence. Tell trainees that they should expect these behaviors and be prepared to deal with them.
1) The caller objects to being questioned.	1. Caller objects to questions.
a) Upon answering a call, the caller may object to being interrogated. They may think you're trying to quiz them on their EMS knowledge!	
b) Tell the caller you're going to help them. Explain to the caller that you are asking all these questions because you need to know what is happening so you can send the proper resources.	
2) The caller reaches the "hysteria threshold."	2. Caller reaches "hysteria threshold."
3) You use "repetitive persistence" to break through resistance and overcome the caller's "hysteria threshold."	3. You use "repetitive persistence" to break hysteria threshold.

TRAINEE TEXT	INSTRUCTOR NOTES
4) Some events that may cause recurring hysteria in callers are provided below.	
a) *"Recurrent Hysteria" syndrome.* After calming down enough to talk to the EMD, the caller is told to get the phone as close to the patient as possible. When once again faced with the seriousness of the situation, the caller may become hysterical again.	4.a. Describe "recurrent hysteria."
b) *"It's not working" syndrome.* This happens when the caller panics at failure of initial attempts at resuscitation.	**<TG PAGE 2-25>** 4.b. Describe the "It's not working" syndrome.
c) *"Telescoping of time" syndrome.* This happens when the caller panics because he or she perceives that events are taking longer than they should. The perception is that the responders aren't coming, and the caller may insist to you that "They aren't coming!"	4.c. Describe the "telescoping of time" syndrome.



Common Events in Calls

- Objection to persistent questioning
- Caller reaches hysteria threshold
- EMD uses "repetitive persistence" to break hysteria threshold
- "It's not working!" syndrome
- "Telescoping of Time" syndrome
- "Secondary Patient" syndrome
- "Tertiary Patient" syndrome

2-1-10

TRAINEE TEXT	INSTRUCTOR NOTES
d) *"Secondary Patient" syndrome.* This happens when the caller realizes that what could have been a tragic outcome has been avoided. The caller then breaks down emotionally from the strain and realization of what could have happened.	**Show** Figure 2-1-11. 4.d. Describe the "Secondary Patient" syndrome
Causes of Secondary Hysteria ▸ Caller panics at failure of initial attempts at resuscitation ("It's Not Working" Syndrome) ▸ Caller thinks its taking too long for help to arrive ("Telescoping of Time" Syndrome) ▸ Caller becomes hysterical after realizing what could have been a tragedy has been avoided ("Secondary Patient" Syndrome) 2-1-11	**<TG PAGE 2-26>**
e) *"Tertiary Patient" syndrom.* This is what may happen to you. After dealing with a particularly stressing call, you may feel physically and emotionally drained. This is due to the probability that you have personalized the call and have become emotionally involved in the outcome. It is important to know that there are probably some resources you can turn to when this happens (friends, family, coworkers, and agency stress management resources). It happens to all EMDs; just understand that help is available.	4.e. Describe the "Tertiary Patient" syndrome and list resources available locally that the trainees can use to deal with it.

TRAINEE TEXT	INSTRUCTOR NOTES
Summary	**<TG PAGE 2-27>**
This unit presented you with the information you need to know to get information from callers so that you can make an effective dispatch decision. You have learned about telephone techniques and how to calm hysterical callers. You now understand how to conduct an initial assessment, and how to handle some of the unique situations that you may run into in your career.	**Review** the unit. Ask for (and answer) trainee questions.
In the next unit you will learn about resource allocation. You will be trained on EMS systems and will learn about your local EMS system. Also, you will learn how to allocate resources in general and within your system.	**Conduct** unit exercise. See Module 2, IG NOTE #1 on page 2 - 31 of this guide.

OBTAINING INFORMATION FROM CALLERS

Materials:

1. sample scripts/scenarios
2. "dummy" phone system or mock-up of terminal (if available)
3. sample initial survey questions to be used by trainees to attempt to get information from callers.

You may need an additional instructor

Time Required:

1.5 hours

Preparation Required:

Prior to starting this unit, the instructor needs to prepare several caller-scripts for use in this exercise. These caller-scripts should be designed around giving trainees practice in getting information from callers. It is suggested that trainees practice working with difficult callers, especially hysterical callers, children callers and speech/hearing impaired callers. If trainees can deal effectively with these types of calls, then dealing with others will be that much easier.

REMEMBER: At this point trainees have not been taught how to use an EMDPRS. We're attempting to see how they deal with callers. Don't attempt to set up scenarios or scripts to the point where they are getting information required for dispatch. We're only trying to give them practice dealing with difficult callers.

MODULE 2 - IG NOTE #1
Obtaining Information from Callers

Instructions:

Instructor and trainee go into "break-out" room. Room should be set up so that the instructor and trainee cannot see each other. Only the instructor gets a script.

The instructor places a call to the trainee and acts out the scenario according to the script. the trainee attempts to get where and what information from the "caller."

Run each trainee through each exercise. If available, second instructor can also be running trainees through the scenarios to speed the process.

Suggested Scripts/Scenarios:

Hysterical Caller

Child Caller

Speech Impaired Caller

You may wish to review the sample scenarios provided in Appendix B. They may be able to provide you with some ideas.

Primary Responsibilities of The EMD

- *Maintaining contact with callers*
- *Dispatching appropriate resources*
- *Calming callers and maintaining control of conversation*
- *Determining if emergency instruction is required*

Interpersonal Qualities EMDs Should Demonstrate for Each Call

- *Be polite*
- *Be calm and reassuring*
- *Be firm*
- *Be clear, concise and use accurate speech*

Proper Telephone Techniques

- *Ask callers if they have a portable phone*
- *Speak directly into the phone*
- *Take control of conversation*
- *Picture caller in your mind*
- *Write down information*
- *Explain waiting periods to callers*
- *Show interest in each caller*

EMD Attitudes

- *Calm and reassuring*
- *Alert to caller responses*
- *Willing to give medical assistance to callers*
- *Quick*
- *Clear*
- *Sound and act confident*

Conducting Initial Assessment

- **WHERE?** *Get locational information*
- **WHAT?** *Identify medical nature*
- **HOW?** *Cause of Injury*
- **WHO?** *Identification of patient*
- **WHEN?** *Timeframe of when event occurred*

Calming Callers

- ***Hysteria Threshold***
- ***Calming Techniques***
    - *"Repetitive Persistence"*
    - *EMDPRS protocols and questions*
    - *Professional dispatch skills/demeanor*
    - *Calm voice/acting calm*

Special Problems

- *Simultaneous emergencies*
- *Confusing information*
- *Insufficient information*
- *Hysterical/Distraught callers*
- *Trauma cases*
- *DOA*
- *English as a Second Language*

Speech/Hearing Impaired Callers

Things to Remember

- *Callers will probably be in a higher state of anxiety than you*
- *Impaired people may not deal with persons outside of their community*

Speech/Hearing Impaired Callers

Things to Remember continued...

- *If the caller is deaf, s/he may not realize when help has arrived*
- *Speak slowly and clearly to callers who have difficulty hearing*
- *If you receive a call and cannot understand the caller, DO NOT ASSUME THE CALLER IS INTOXICATED!*

Common Events in Calls

- *Objection to persistent questioning*
- *Caller reaches hysteria threshold*
- *EMD uses "repetitive persistence" to break hysteria threshold*
- *"It's not working!" syndrome*
- *"Telescoping of Time" syndrome*
- *"Secondary Patient" syndrome*
- *"Tertiary Patient" syndrome*

Causes of Secondary Hysteria

- *Caller panics at failure of initial attempts at resuscitation ("It's Not Working" Syndrome)*
- *Caller thinks its taking too long for help to arrive ("Telescoping of Time" Syndrome)*
- *Caller becomes hysterical after realizing what could have been a tragedy has been avoided ("Secondary Patient" Syndrome)*

Unit 2 Instructor Preparation

Following are a list of questions and/or topics which appear in Unit 2, for trainees to answer and discuss. Although information is provided in the Trainee Guide and Instructor Guide, you should be prepared to discuss these questions/topics and give additional information and examples, based on local agency guidelines and your experience.

1. Describe "hot" and "cold" response modes and ask trainees to identify the equivalents in their agency. Be prepared to explain the different response modes agencies may have in your region.

2. Discuss generic response configurations and which type of configurations the agencies in your region have.

3. What is the difference between a response mode and response configuration? What are the four generic response configurations?

4. Review local medical resources. What are some of the resources available in your system? (You may want to develop a handout of resources available in your area.)

5. What are some other types of things you should know for each resource available in your system?

Module 2 - Unit 2
Resource Allocation

TRAINEE TEXT

UNIT OVERVIEW

After receiving calls and determining the proper response levels for the calls, EMDs must allocate resources for those calls.

Unit 2, Resource Allocation, presents the basic structure of the local EMS system and general information regarding resource allocation. You will also learn about the resources available in your local system. You will be presented with information regarding general response categories and the principles of successful resource allocation.

UNIT OBJECTIVES

Unit Learning Objectives

Upon completion of this unit, you will be able to:

3. Describe the local EMS system.

4. Describe how to properly allocate resources.

Enabling Learning Objectives

To meet the unit learning objectives, you will:

3.1 Describe the resources available in the local EMS system.

3.2 Describe local pre-configured response modes.

4.1 Determine the appropriate resources to be allocated by considering such factors as:

4.1.1 the nature of the problem;

INSTRUCTOR NOTES

<TG PAGE 2-29>

Introduce the unit.

State the unit learning objective(s).

TRAINEE TEXT	INSTRUCTOR NOTES
4.1.2 personnel and vehicles available;	
4.1.3 vehicle proximity to the patient;	**<TG PAGE 2-30>**
4.1.4 ambulance coverage zones and	
4.1.5 the types of equipment and trained personnel carried by each resource.	

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TRAINEE TEXT	INSTRUCTOR NOTES
RESOURCE ALLOCATION	**<TG PAGE 2-31>**
Resource allocation is one of the most important functions of an EMD. It demands an in-depth knowledge of the local EMS system and a complete understanding of the philosophy of effective dispatch. This unit trains you to understand your local EMS system, from its basic layout to its standard and alternate resources. You will learn to identify each type of resource and its capabilities as well as what it takes to properly allocate resources. Finally, you will also learn about response categories.	**Describe** what the trainee will learn in this unit.
Successful Resource Allocation	**Show** Figure 2-2-1.
Objectives in Allocation. EMDs must first consider predetermined response configurations and modes for the local area where they work. Allocation of resources depends on your ability to accomplish a specific set of objectives. Your objectives are to: 1) *Obtain the proper information.* By using the local EMDPRS, you can get the information you need for effective resource allocation. 2) *Maintain an accurate resource inventory.* You need to keep up-to-date records on the resources available to you. 3) *Identify situations that require specific types of assistance* (HAZMAT, High-rise rescue, etc.). The EMDPRS will help you identify these.	**List and describe** the objectives you are trying to accomplish for successful resource allocation.

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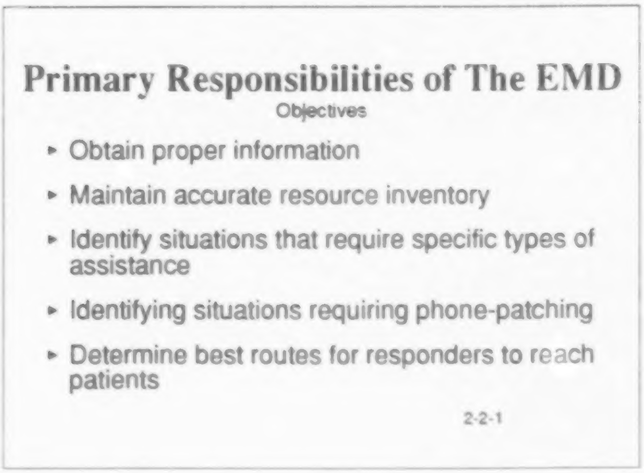
TRAINEE TEXT | **INSTRUCTOR NOTES**

4) *Identify situations requiring phone-patching.* Specific situations like crisis-intervention and poison-control calls may require you to do this.

5) *Determine the best routes for dispatched resources to follow to reach a patient.* This comes from a thorough knowledge of the community in which you work. It is your job to get this familiarization.

<TG PAGE 2-32>



Primary Responsibilities of The EMD

Objectives

- Obtain proper information
- Maintain accurate resource inventory
- Identify situations that require specific types of assistance
- Identifying situations requiring phone-patching
- Determine best routes for responders to reach patients

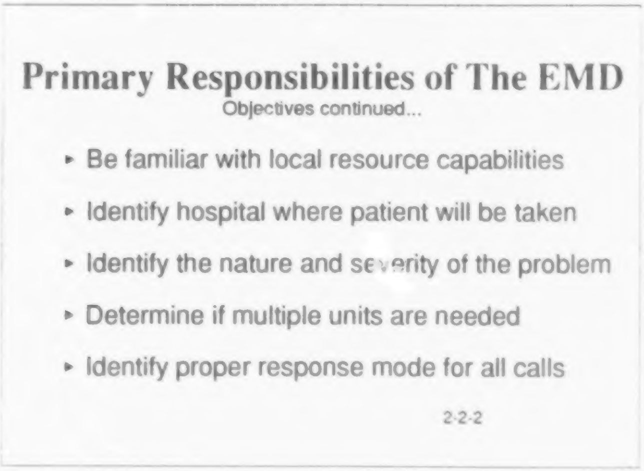
2-2-1

Show Figure 2-2-2. Continue discussion of allocation objectives.

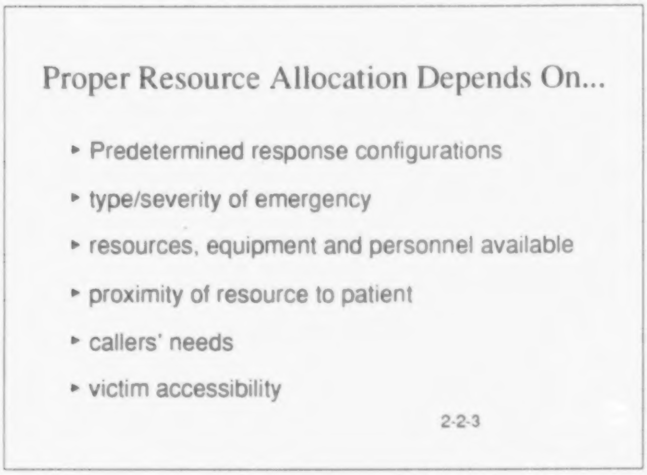
6) *Be familiar with local resource capabilities.* Knowing what each resource is capable of is very important in helping you decide who to send.

7) *Identify the hospital where a patient will be taken.* This allows you to set up communication or telemetry lines, if needed.

8) *Identify the nature and severity of the problem.* Proper interrogation procedures and use of the EMDPRS will help you do this.

TRAINEE TEXT	INSTRUCTOR NOTES
9) *Determine if multiple units (or mutual aid) are needed.* This is based on the urgency and severity of the medical situation, number of patients and location or proximity.	
10) *Identify the proper response mode for all calls.* Response modes are preconfigured for you in your EMDPRS for each medical complaint type. Response modes you will usually hear about are "Hot" and "Cold" (more on these later).	**<TG PAGE 2-33>**
 **Primary Responsibilities of The EMD** Objectives continued... ▸ Be familiar with local resource capabilities ▸ Identify hospital where patient will be taken ▸ Identify the nature and severity of the problem ▸ Determine if multiple units are needed ▸ Identify proper response mode for all calls 2-2-2	**Show** Figure 2-2-3.
What does proper allocation depend on? Proper resource allocation depends on a variety of factors. These factors are listed below: 1) predetermined response configurations based on local needs and resources; 2) the type and severity of the emergency; 3) the resources, equipment types and personnel available;	**Tell** trainees what proper allocation depends on.

TRAINEE TEXT	INSTRUCTOR NOTES
4) the proximity of the resource to the patient;	
5) response time to the patient;	**<TG PAGE 2-34>**
6) callers' needs and	**Remind** trainees that speeding doesn't always make a difference to the outcome.
7) victim accessibility.	



Proper Resource Allocation Depends On...

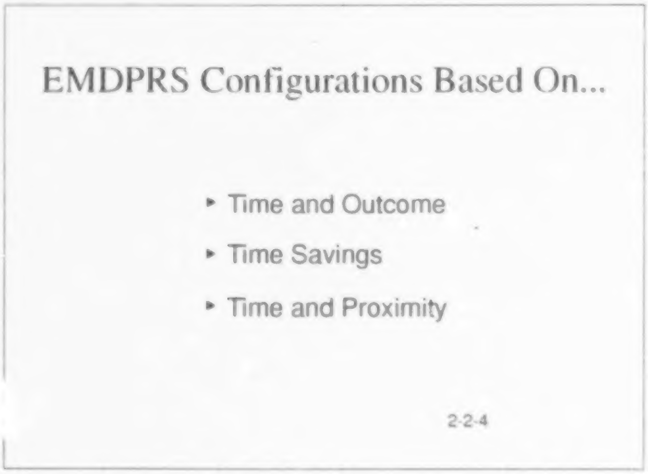
- Predetermined response configurations
- type/severity of emergency
- resources, equipment and personnel available
- proximity of resource to patient
- callers' needs
- victim accessibility

2-2-3

TRAINEE TEXT	INSTRUCTOR NOTES
Response Modes and the Four General Predetermined Response Configurations. As you have learned, you decide the response modes for dispatched units. Your decision is based on predetermined response configurations that are listed in your EMDPRS. Your local medical advisor sets up the configurations based on the following things:	**Show** Figure 2-2-4. **Tell** trainees that response configurations are designed based on:
1) *Time and Outcome.* Will time make a difference in the outcome? Will getting there faster be that much help to the patient?	1. time and outcome;
2) *Time Savings.* Will time to the patient be reduced by using the "hot" response mode (aka Emergency Response Mode - ERM)? Will using the emergency response mode save time?	2. time savings and

TRAINEE TEXT

3) *Time and Proximity.* Will time be saved by using resources closer to the patient in a normal mode ("Cold")? Would it be faster to use a resource further away but send it in "Hot."



EMDPRS Configurations Based On...

- Time and Outcome
- Time Savings
- Time and Proximity

2-2-4

There are two things you need to learn about in order to better understand how to use the configurations found in your EMDPRS. These are: ***response modes*** and ***response configurations***.

There are two types of **response modes**, *"Hot"* or *"Cold."* Earlier in this unit you were told that you'd learn about response modes because you are responsible for using the EMDPRS to properly assign a response mode to a dispatched unit.

1) *"Hot"* responses can be called many things. One popular way to refer to a "hot" response is "going lights and sirens." The *Uniform Vehicle Code and Model Traffic Ordinance* refers to the "Hot" response as the "Emergency Response Mode." It defines it as an "emergency medical vehicle response using lights and sirens as prescribed in Sections 11-

INSTRUCTOR NOTES

<TG PAGE 2-35>

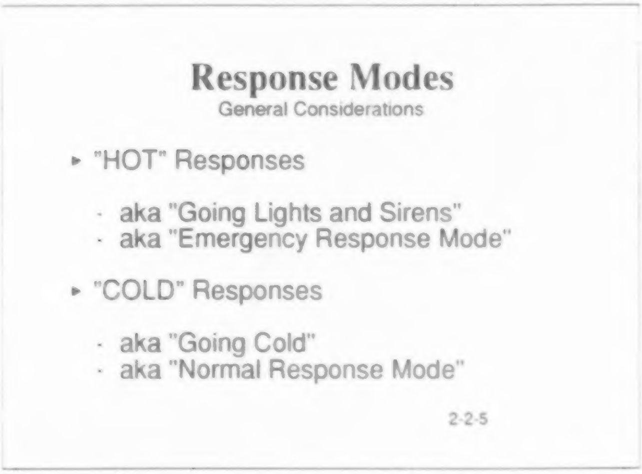
3. time/proximity.

Show Figure 2-2-5.

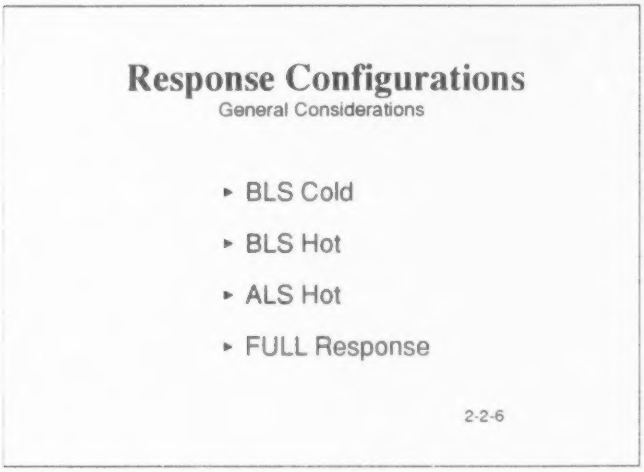
Discuss the two most common response modes.

Describe the "hot" response. Ask trainees to identify its equivalent in their agency. This is especially good if trainees are from multiple agencies.

<TG PAGE 2-36>

TRAINEE TEXT	INSTRUCTOR NOTES
106, 12-214 and 15-111 of the *Uniform Vehicle Code and Model Traffic Ordinance.*"	
2) *"Cold"* responses are also called *"going cold."* These responses require a normal traffic response. This means the responding units get no special driving privileges, like using their siren or legally exceeding the speed limit in order to reach a patient. It is referred to as the "Normal Response Mode" in the *Uniform Vehicle Code and Model Traffic Ordinance.*	**Describe** "cold" responses. Again, ask trainees to identify their agency equivalent.
 **Response Modes** General Considerations ▸ "HOT" Responses · aka "Going Lights and Sirens" · aka "Emergency Response Mode" ▸ "COLD" Responses · aka "Going Cold" · aka "Normal Response Mode" 2-2-5	
Response types and response modes are used by your medical advisor to determine **response configurations**. Because they are determined in advance, they are usually called "predetermined response configurations." All this means is that the type of unit and what response mode it will use has been decided in advance by the local medical advisor, in conjunction with other EMD advisory personnel. These configurations are based on a resource, its capabilities and personnel and on the time factors needed for the medical complaint. In general, there are four response configurations.	**<TG PAGE 2-37>** **Define/describe** response configurations and how they are determined. **Show** Figure 2-2-6.

TRAINEE TEXT	INSTRUCTOR NOTES
NOTE: Not all areas use these four generic response configurations. Some areas may have more, others less. What is important to remember is that response configurations are determined by local authorities, based on local resources and may differ from agency to agency.	Be sure to tell trainees that the four generic response configurations you are discussing are generic and may not be used in their agency.
1) *"BLS Cold"* is a resource with basic life support capability dispatched and told to respond in a normal response mode (no lights or sirens).	**Describe** "BLS Cold."
2) *"BLS Hot"* is a resource with basic life support capability dispatched and told to respond in an emergency response mode (using its lights and sirens).	**Describe** "BLS Hot."
3) *"ALS Hot"* is a resource with advanced life support capability dispatched and told to respond in an emergency response mode (using its lights and sirens).	**<TG PAGE 2-38>** **Describe** "ALS Hot."
4) *"FULL Response"* is when "everything rolls" using the emergency response mode (using lights and sirens).	**Describe** the "FULL Response."

TRAINEE TEXT	INSTRUCTOR NOTES
 **Response Configurations** General Considerations ▸ BLS Cold ▸ BLS Hot ▸ ALS Hot ▸ FULL Response 2-2-6	
QUESTION: *What is the difference between a response mode and response configuration? What are the four generic response configurations?*	**Ask** trainees to define the difference between response modes and configuration and to identify the four generic response configurations.
NOTE: Be sure to ask questions about things you do not understand. Remember, not all areas or agencies will use the same terms discussed here. The terms discussed here are just those most commonly used.	**<TG PAGE 2-39>** **Ask** trainees for any questions they may have at this point and answer them.

TRAINEE TEXT

Principles of Successful Resource Allocation

When allocating resources, several things determine whether or not you will do so. These things (principles) include the following. Some you may already recognize.

1) *Knowledge of the status of all your resources at all times.* Are they working? Are they in the shop for repair? Is one group out for training, etc?

2) *Sending the closest unit(s) that will meet the need.* Is the nearest unit capable of meeting the patient's medical needs?

3) *Sending the appropriate resources to meet the need.* ALS vs. BLS, Multiple vs. Solitary responders, other resources as available in your local system

4) *Understanding the influence of proximity and response time on the outcome.*

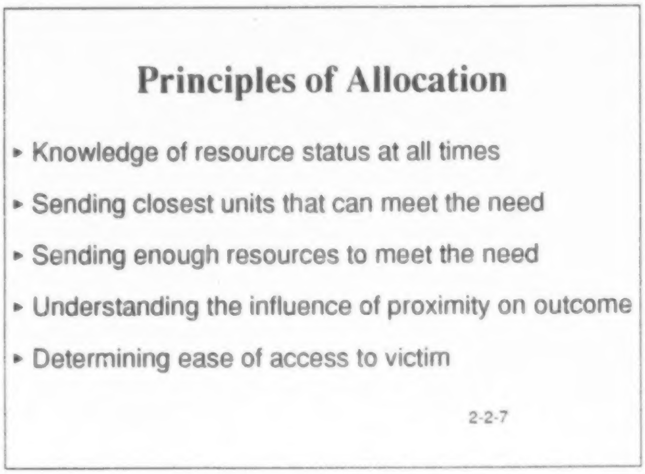
5) *Determining how easy it is to reach the victim before sending out units.* You need to know if the victim is in an easily accessible place. For example, if the victim is located in a remote ravine after a four-wheeling accident, should you send the two-wheel drive units out? Air ambulance?

INSTRUCTOR NOTES

Show Figure 2-2-7.

Discuss the first five principles of successful resource allocation.

TRAINEE TEXT



Principles of Allocation

- Knowledge of resource status at all times
- Sending closest units that can meet the need
- Sending enough resources to meet the need
- Understanding the influence of proximity on outcome
- Determining ease of access to victim

2-2-7

6) *Knowing the availability of first responders, other agencies and multiple units for quick responses as the situation requires it.* What other resources are available that meet the need?

7) *Having backups for resources that are "out-of-service."* Having additional backup resources are very popular in systems that engage in fluid deployment, system management and station/zone coverage deployment strategies.

8) *Determining need based on clinical/medical criteria found in your EMDPRS.* What exactly **is** the patient's medical need? What does the EMDPRS say?

9) *Using EMDPRS recommendations to determine response configuration and mode.* You will find these recommendations in the EMDPRS. They have been predetermined by your medical director to be most effective.

INSTRUCTOR NOTES

<TG PAGE 2-40>

Show Figure 2-2-8.

Discuss principles six through ten of successful resource allocation.

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TRAINEE TEXT

Principles of Allocation

continued...

- Knowledge of availability of first responders, other agencies and multiple units for quick response
- When in doubt, send out more than you can prove you'll need
- Having "backups" for units "out-of-service"
- Determine need based on medical/clinical criteria in EMDPRS
- Use EMDPRS recommendation to determine response configuration and mode

2-2-8

Local Medical Resources

It is up to you to know what medical resources are available in your local EMS system. If you know and understand the medical resources in your area, you will be doing a more effective job of emergency medical dispatch.

There are many resources available. These resources vary from area to area. The resources that you have may or may not be available to another agency or town. Following is a list of some of the more common medical resources:

1) Hospitals;

2) Medical centers, Burn Centers, Trauma Centers, Crisis Centers, Hyperbaric Chamber facilities;

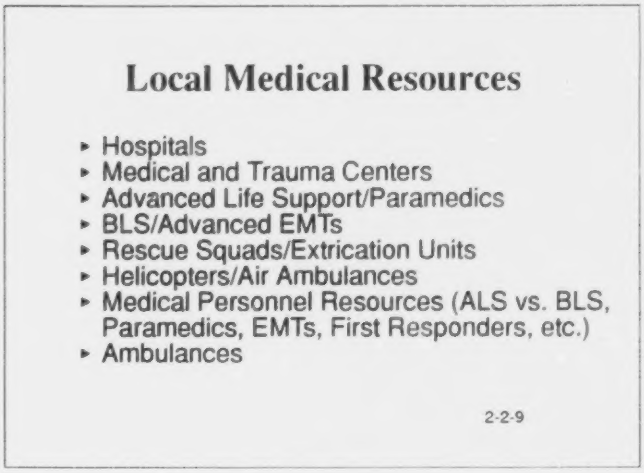
3) Advanced Life Support/Paramedics;

INSTRUCTOR NOTES

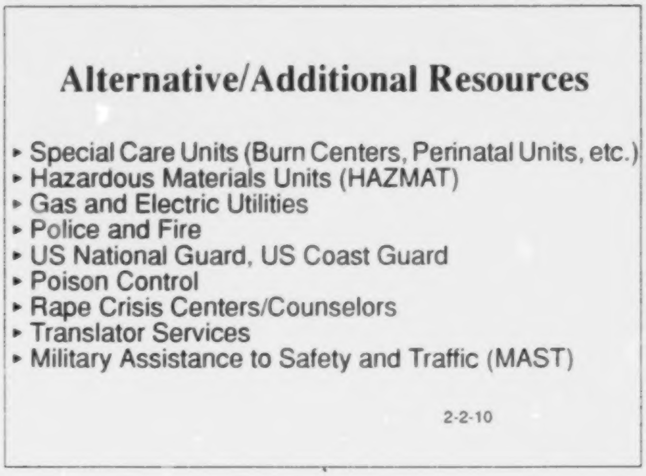
<TG PAGE 2-41>

Show Figure 2-2-9.

Review local medical resources. If possible, prior to the start of training you should have a list of the resources available in a particular area. This might not be practical, however, if trainees come from multiple agencies.

TRAINEE TEXT	INSTRUCTOR NOTES
4) Basic Life Support/Advanced Emergency Medical Technicians (EMTs); 5) Rescue Squads/Extrication Units; 6) Helicopters/Air Ambulances and 7) Ambulances.	**<TG PAGE 2-42>**
 **Local Medical Resources** ▸ Hospitals ▸ Medical and Trauma Centers ▸ Advanced Life Support/Paramedics ▸ BLS/Advanced EMTs ▸ Rescue Squads/Extrication Units ▸ Helicopters/Air Ambulances ▸ Medical Personnel Resources (ALS vs. BLS, Paramedics, EMTs, First Responders, etc.) ▸ Ambulances 2-2-9	
QUESTION: *What are some of the resources available in your system? The instructor will review local resources and explain some of their unique capabilities.*	**Ask** trainees to identify resources available in their EMS system. Review their capabilities.

TRAINEE TEXT	INSTRUCTOR NOTES
Most systems have additional resources to enhance their resource base. These resources are usually considered alternates, because they are not the main resources used but are specialty resources and are used only in special situations. You should be familiar with the resources and procedures to access them, should they be necessary. Some of the more common alternatives are listed below. They include: 1) special care facilities (Burn Centers, Perinatal Units, Psychiatric Centers, etc.); 2) hazardous material resources (HAZMAT); 3) gas and electric utilities; 4) Police and Fire; 5) Poison Control; 6) Sexual Assault Centers/Counselors; 7) Translator Services (provide interpretation of various languages); 8) US Coast Guard and 9) Military Assistance to Safety and Traffic (MAST).	**<TG PAGE 2-43>** **Show** Figure 2-2-10. **Describe** these additional resources and have trainees identify others they can think of.

TRAINEE TEXT	INSTRUCTOR NOTES
 **Alternative/Additional Resources** - Special Care Units (Burn Centers, Perinatal Units, etc.) - Hazardous Materials Units (HAZMAT) - Gas and Electric Utilities - Police and Fire - US National Guard, US Coast Guard - Poison Control - Rape Crisis Centers/Counselors - Translator Services - Military Assistance to Safety and Traffic (MAST) 2-2-10	**<TG PAGE 2-44>**
Regardless of the resource (standard or alternative), your agency should always have on hand information about the following for each resource: 1) basic and special capabilities of each resource and 2) resource location and status.	**Tell** trainees it is very important that they learn resource capabilities for each resource, and they should always know if the resource is available, and its location.
QUESTION: *What other types of things should you know about each resource available to you? Discuss these with your instructor and class.*	**Ask** trainees to identify any other special capabilities that they know of for resources.
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TRAINEE TEXT	INSTRUCTOR NOTES
Summary In this unit you learned about the basic philosophy behind resource allocation. You know what it takes to determine what resources are used and how your medical director came up with the resources you are using. You also learned about the various response modes and response configurations commonly available in EMS systems. You also discussed response modes and configurations used in ***your*** system. Finally, you learned about the common types of resources that are available in many EMS systems and discussed the resources available locally. In Unit 3, you will learn about the philosophy behind giving medical instructions over the telephone and how to provide those instructions. Also provided will be some helpful "housekeeping hints" that you might want to use to make providing instructions over the phone easier.	**<TG PAGE 2-45>** **Review** the unit. Ask for (and answer) trainee questions.

Primary Responsibilities of The EMD

Objectives

- *Obtain proper information*
- *Maintain accurate resource inventory*
- *Identify situations that require specific types of assistance*
- *Identifying situations requiring phone-patching*
- *Determine best routes for responders to reach patients*

Primary Responsibilities of The EMD

Objectives continued...

- *Be familiar with local resource capabilities*
- *Identify hospital where patient will be taken*
- *Identify the nature and severity of the problem*
- *Determine if multiple units are needed*
- *Identify proper response mode for all calls*

Proper Resource Allocation Depends On...

- *Predetermined response configurations*
- *type/severity of emergency*
- *resources, equipment and personnel available*
- *proximity of resource to patient*
- *callers' needs*
- *victim accessibility*

EMDPRS Configurations Based On...

- *Time and Outcome*
- *Time Savings*
- *Time and Proximity*

Response Modes

General Considerations

- **"HOT" Responses**
  - *aka "Going Lights and Sirens"*
  - *aka "Emergency Response Mode"*
- **"COLD" Responses**
  - *aka "Going Cold"*
  - *aka "Normal Response Mode"*

Response Configurations

General Considerations

- *BLS Cold*
- *BLS Hot*
- *ALS Hot*
- *FULL Response*

Principles of Allocation

- *Knowledge of resource status at all times*
- *Sending closest units that can meet the need*
- *Sending enough resources to meet the need*
- *Understanding the influence of proximity on outcome*
- *Determining ease of access to victim*

Principles of Allocation

continued...

- *Knowledge of availability of first responders, other agencies and multiple units for quick response*
- *When in doubt, send out more than you can prove you'll need*
- *Having "backups" for units "out-of-service"*
- *Determine need based on medical/clinical criteria in EMDPRS*
- *Use EMDPRS recommendation to determine response configuration and mode*

Local Medical Resources

- *Hospitals*
- *Medical and Trauma Centers*
- *Advanced Life Support/Paramedics*
- *BLS/Advanced EMTs*
- *Rescue Squads/Extrication Units*
- *Helicopters/Air Ambulances*
- *Medical Personnel Resources (ALS vs. BLS, Paramedics, EMTs, First Responders, etc.)*
- *Ambulances*

Following are a list of questions and/or topics which appear in Unit 3, for trainees to answer and discuss. Although information is provided in the Trainee Guide and Instructor Guide, you should be prepared to discuss these questions/topics and give additional information and examples, based on local agency guidelines and your experience.

1. Describe the basic sections (labels) found on an EMDPRS protocol card. Be prepared to discuss the labels on the cards that are used in your local agency.

2. Be sure to emphasize and discuss the importance of the All-Caller Interrogation card.

3. Stress to the trainees the importance of getting a "call-back" number.

4. Why is the EMDPRS important to you in providing medical instruction? How does it relate to proper dispatch and resources allocation?

5. What is the role of an EMD in emergency situations? Why are EMDs so important? What types of things should be practiced? Can you name the communication skills that are most important to the proper provision of telephone medical instructions?

6. Discuss ways to improve the delivery of instructions. (Be prepared to give some ideas of your own.)

7. Discuss and practice medical instruction scenarios. (You should review the scenarios provided in Appendix B of this guide and develop scenarios which are appropriate for your local agency.)

Module 2 - Unit 3
Providing Emergency Care Instructions

TRAINEE TEXT	INSTRUCTOR NOTES
UNIT OVERVIEW	**<TG PAGE 2-47>**
Once a call has been received and resources have been allocated, it may be necessary for you to offer a caller the opportunity to perform some emergency care procedures. If a caller accepts the offer to carry out telephone instructions, it is up to you to properly give instructions.	**Introduce** the unit.
Unit 3, Providing Emergency Care Instructions trains you to properly provide emergency care instruction over the telephone. You will be presented with the philosophy behind the provision of emergency medical instruction as well as information on how to carry out that process.	
There are also sections on your role in presenting telephone medical instruction and some basic "housekeeping" hints to help you effectively provide emergency care instruction to callers.	
UNIT OBJECTIVES	
Unit Learning Objective	**State** the unit learning objective(s).
Upon completion of this unit, you will be able to:	
5. Describe the proper way to provide emergency care instructions.	
Enabling Learning Objectives	
To meet the unit learning objective, you will:	
5.1 Describe the philosophy behind providing emergency care instructions.	

TRAINEE TEXT	INSTRUCTOR NOTES
5.2 List at least six requirements to creating effective communication between the EMD and the caller. 5.3 List the "housekeeping hints" that aid EMDs in the delivery of effective telephone medical instructions.	

TRAINEE TEXT	INSTRUCTOR NOTES
THE PHILOSOPHY OF EMERGENCY CARE INSTRUCTION	<TG PAGE 2-49>
Though most calls you receive are not life-threatening, you will occasionally find it necessary to give medical instructions to callers. You must therefore be ready to make decisions about which emergency care needs are required based on the information you get from your initial survey of the caller and your EMDPRS.	**Briefly review** the purpose of this unit.
Background	
Emergency Care Instructions. The amount of telephone instruction given by telephone and the responsibility for giving it, will vary from area to area. ***Who*** is responsible is determined by local planning and advisory guidance committees. They also determine what types of instructions can be presented and how they will be presented.	**Give** the trainees the background involved in the development and provision of emergency medical care instructions.
These same advisory committees determine response configurations and modes, resource allocations and policies for response and instructional needs. The EMDPRS is designed to incorporate all of their requirements. Therefore, before any EMD program is set up, these things must be decided.	
Why use the EMDPRS? There will be times when you will find it necessary to give callers some lifesaving techniques over the telephone. Because you are not at the scene and have to rely on the caller to give you information, you need to rely on something to help you determine what is happening. That is the purpose of the EMDPRS.	**Tell** trainees why it is important to use the EMDPRS. 1. Helps you determine what's happening even though you aren't there.

TRAINEE TEXT	INSTRUCTOR NOTES
The EMDPRS provides interrogation questions designed to help you figure out what is happening medically. It then gives you information about what (if any) resources are to be sent out and if there are any medical instructions the caller may need. If so, the EMDPRS will give them to you. The use of a standardized and medically approved EMDPRS makes giving medical information consistent and accurate. This is because you give callers the same information, in the same manner, every time.	**<TG PAGE 2-50>** 2. Provides interrogation questions designed to help you figure out what is happening medically. 3. EMDPRS questions are standardized and consistent so you'll ask the same questions each time.
When a situation arises that calls for using medical instructions, you need to consider:	**Show** Figure 2-3-1. **Tell** trainees that when they are trying to decide whether to give instructions or not, they need to consider:
1) *Is it possible?* Is the caller a third-party caller (not with the patient, but reporting from some distance)? Is the phone near the patient? Are there language difficulties (you understand them, they understand you)?	1. Possible?
2) *Is it appropriate?* The EMDPRS will tell you if there is any instruction that needs to be given. However, you must decide if it is needed based on the situation. In some cases, the responders might get to the patient beore the instructions can be given.	2. Appropriate?

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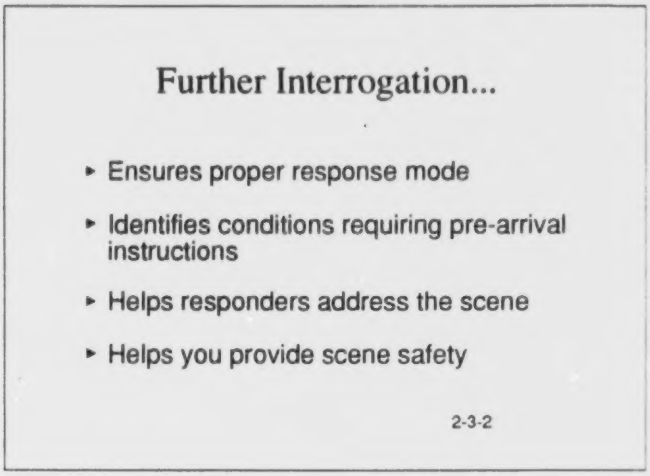
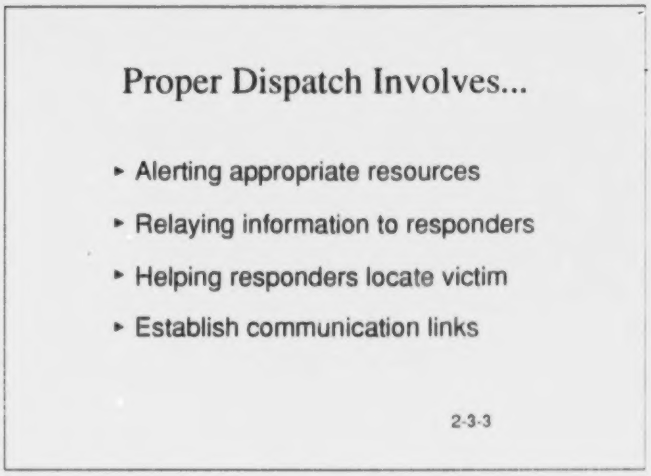
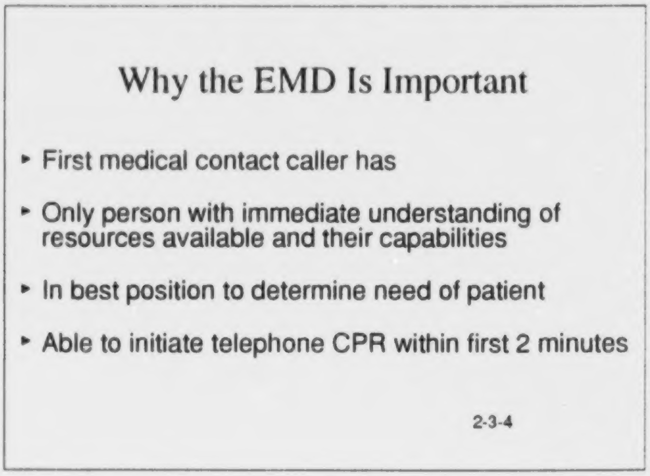
TRAINEE TEXT	INSTRUCTOR NOTES
Using Medical Instructions The EMD Needs to Consider... ▸ Is it possible? · Is phone near patient? · Third-party caller? ▸ Is it appropriate? · Does the situation call for it? · Is there a protocol for it? 2-3-1	
Providing Emergency Care Instructions	**<TG PAGE 2-51>**
Some Important Aspects of Providing Emergency Care Instruction. Remember, your role is to gather specific medical information and prioritize responses by using the EMDPRS. To be effective, you must properly carry out three functions:	**Discuss** providing emergency medical instructions. **Tell** trainees that effectiveness relies on 3 functions:
1) *collect information and question callers;*	1. information collection;
2) *dispatch appropriate resources and*	2. dispatch appropriateness and
3) *provide pre-arrival and post-dispatch instruction (when appropriate and possible to do so).*	3. provision of pre-arrival/post-dispatch instructions.

TRAINEE TEXT	INSTRUCTOR NOTES
EMDs use the *"Initial Survey" or "All-Caller Interrogation"* protocol to get information from callers, to determine initial dispatch criteria and to find the appropriate card to turn to in the EMDPRS. These labels will vary by the EMDPRS selected by the local agency.	**Describe** the **initial survey/all-caller interrogation**. **Tell** trainees that the labels may vary by agency. Instructor, be sure to use the labels used in the EMDPRSs that your trainees use.
Once you determine which card to use, you should turn to that card. Each EMDPRS protocol card then gives you more questions to ask the caller (more on this in Module 3). The information you get from these questions is used to supplement information you've already collected. These are found in the *"Key Questions"* and *"Additional Information"* sections of the card. They are designed to help you get more information on the following:	**Show** Figure 2-3-2. **Describe** the purpose of the **Key Questions** and **Additional Information** sections.
1) *additional (and/or clarifying) location information;*	
2) *further clarification of the nature and severity of the medical emergency;*	
3) *types of pre-arrival/post-dispatch instructions to give;*	
4) *determination of additional information that should be relayed to responders;*	**<TG PAGE 2-52>**
5) *ensure determination of the proper response mode;*	
6) *identify conditions that require pre-arrival instructions;*	

TRAINEE TEXT	INSTRUCTOR NOTES
 Further Interrogation... ▸ Ensures proper response mode ▸ Identifies conditions requiring pre-arrival instructions ▸ Helps responders address the scene ▸ Helps you provide scene safety 2-3-2	**Show** Figure 2-3-3. Continue discussion of Key Question/ Additional Information sections.
7) *details to help responders address the scene;* 8) *scene safety requirements for responders and bystanders;* 9) *proper resources to alert;* 10) *relaying patient information to responders;* 11) *helping responders locate the victim and*	
12) *establishing communication links between the caller and the responders* and any additional resources that may be required (translator services, specialty resources like poison control centers, burn centers, police, etc.).	**<TG PAGE 2-53>**

TRAINEE TEXT	INSTRUCTOR NOTES
 Proper Dispatch Involves... ▸ Alerting appropriate resources ▸ Relaying information to responders ▸ Helping responders locate victim ▸ Establish communication links 2-3-3	
QUESTION? *Why is the EMDPRS important to you in providing medical instruction? How does it relate to proper dispatch and resources allocation?*	**Ask** trainees to tell you why the EMDPRS is important and how it relates to dispatch and resource allocation.
Role of the EMD in Providing Telephone Instructions. You are a critical link in patient survival. This is so, because:	**<TG PAGE 2-54>** **Show** Figure 2-3-4. Tell trainees they are critical to patient survival because:
1) *you are the first medical contact that a caller has;*	1. first medical contact of callers;

TRAINEE TEXT	INSTRUCTOR NOTES
2) *you are in the best position to determine the needs of the patients and provide appropriate instructions and*	2. best position to immediately determine medical needs and
3) *you are able to initiate telephone CPR.*	3. best able to initiate telephone CPR.



Why the EMD Is Important

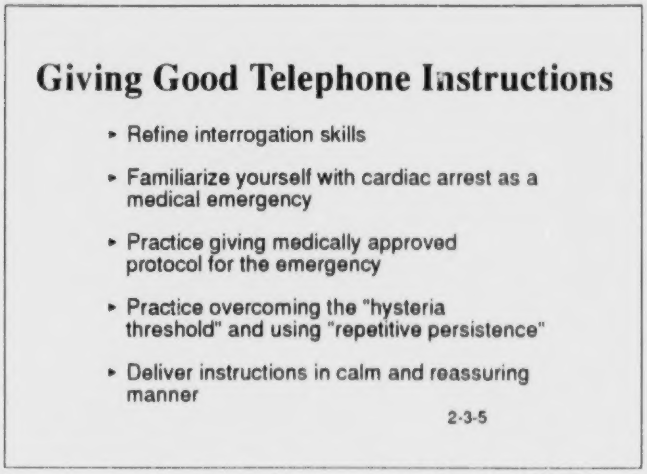
- First medical contact caller has
- Only person with immediate understanding of resources available and their capabilities
- In best position to determine need of patient
- Able to initiate telephone CPR within first 2 minutes

2-3-4

There are a few things you need to do to best provide telephone medical instructions. Many of these require preparation before they are actually needed. To be at your best when giving medical instruction, you need to:	**Show** Figure 2-3-5. List ways to be best prepared to give medical instructions.
1) *refine communications skills;*	
2) *familiarize yourself with cardiac arrest as a medical emergency;*	
3) *practice giving the medically approved scripted instructions;*	**<TG PAGE 2-55>**
4) *practice overcoming the hysteria threshold and using "repetitive persistence" and*	
5) *deliver instructions in a calm and reassuring manner.*	

TRAINEE TEXT

NOTE: Practice ensures the consistent delivery of instructions necessary for patient survival. Your comfort level with your skills makes it easier for you to give good telephone instruction because you are calmer and confident. Your manner then calms the caller and makes it likely that the caller will relax and be more willing to follow your instructions.



Giving Good Telephone Instructions

- Refine interrogation skills
- Familiarize yourself with cardiac arrest as a medical emergency
- Practice giving medically approved protocol for the emergency
- Practice overcoming the "hysteria threshold" and using "repetitive persistence"
- Deliver instructions in calm and reassuring manner

2-3-5

Communication Skills for Providing Medical Instructions. Properly communicating telephone instructions takes more than just reading the instructions to the caller. In general there are six skills or techniques, that you can use to make your communication better. They include:

1) *be calm and reassure the caller;*

2) *be accurate;*

3) *be clear (speak slowly and enunciate properly);*

INSTRUCTOR NOTES

Tell trainees that practice with the instructions is vitally important. A confident manner is very important to callers, and therefore to patients, if they are going to get relief.

<TG PAGE 2-56>

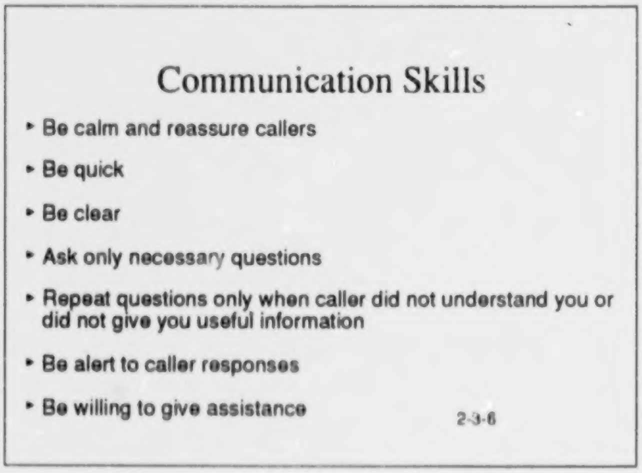
Show Figure 2-3-6. List the six general communication skills needed to best provide medical instructions.

TRAINEE TEXT	INSTRUCTOR NOTES

4) *follow the scripted telephone treatment sequence;*

5) *repeat instructions only when callers don't understand the instruction or haven't given you the right information and*

6) *listen carefully.*



Communication Skills

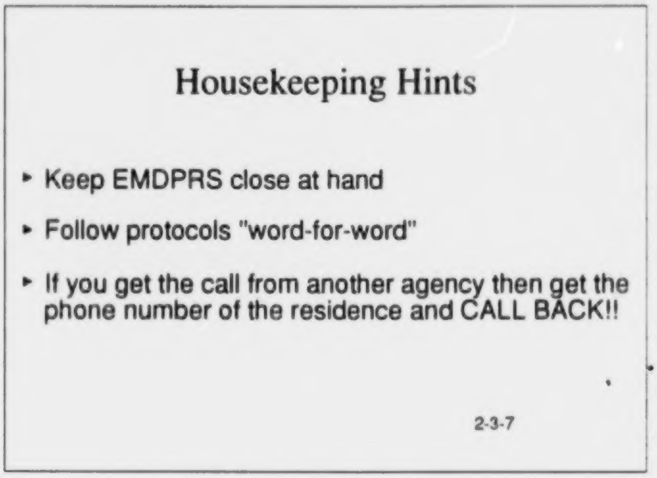
- Be calm and reassure callers
- Be quick
- Be clear
- Ask only necessary questions
- Repeat questions only when caller did not understand you or did not give you useful information
- Be alert to caller responses
- Be willing to give assistance

2-3-6

QUESTION? *What is the role of an EMD in emergency situations? Why are EMDs so important? What types of things should be practiced? Can you name the communication skills that are most important to the proper provision of telephone medical instructions?*

<TG PAGE 2-57>

Ask this series of questions of the trainees.

TRAINEE TEXT	INSTRUCTOR NOTES
Helpful Housekeeping Hints. Below are some hints that will help make it easier for you to provide instructions to callers. They include: 1) *keep the EMDPRS close at hand;* 2) *follow the protocols "word-for-word" and* 3) *if you get the call from another agency, get the phone number of the residence and* ***CALL BACK****. This might happen if you work for an agency where police and/or fire dispatchers (or whomever) are not located in the same facility as you.*	**Review** the housekeeping hints provided here.
 Housekeeping Hints - Keep EMDPRS close at hand - Follow protocols "word-for-word" - If you get the call from another agency then get the phone number of the residence and CALL BACK!! 2-3-7	**<TG PAGE 2-58>**

TRAINEE TEXT	INSTRUCTOR NOTES
QUESTION? *Can you think of any additional hints that might make delivery of instructions better? If so, share them with the class.*	**Ask** trainees for any other ideas they may have to improve provision of instructions. Be ready to give some of your own.
Summary In this unit, you learned the proper methods for delivering medical instructions. You learned why the EMD is most important in the provision of the instructions, the basic philosophy behind telephone instructions and how to prepare yourself for giving these instructions. Finally, you learned some tips that will make it easier to deliver these instructions.	**<TG PAGE 2-59>** **Review** the unit. Ask for (and answer) trainee questions.
In Module 3, you will learn about the development and use of the Emergency Medical Dispatch Protocol Reference System (EMDPRS) and you will receive training on each of the 32 chief complaint types. You also will learn how to read and use the EMDPRS your agency uses.	**Conduct** the scenarios as found in Module 2, IG NOTE #2 on page 2-69 of this guide.

MEDICAL INSTRUCTION SCENARIOS

Materials:

1. 4 Medical instruction scenarios
2. Mock-up equipment or telephone set-up

* You may want to have an additional instructor help in this exercise to speed the process.

Time:

1.5 hours

Instructions:

Select one medical instruction scenario for each trainee. The instructor acts the part of the "caller". Each scenario is to be set up so that you can assume that the trainee has gone through the all-caller interrogation sequence, dispatched and has identified the medical chief complaint. The trainee now attempts to get the "caller" to carry out the medical instructions.

Suggested Scenarios:

Medical Scenario #1 - Cardiac Arrest

Medical Scenario #2 - Drowning

Medical Scenario #3 - Hemorrhage/Laceration

Medical Scenario #4 - Choking

You may wish to review the sample scenarios provided in Appendix B. They may be able to provide you with some ideas.

Using Medical Instructions

The EMD Needs to Consider...

- ***Is it possible?***
  - *Is phone near patient?*
  - *Third-party caller?*
- ***Is it appropriate?***
  - *Does the situation call for it?*
  - *Is there a protocol for it?*

Further Interrogation...

- *Ensures proper response mode*
- *Identifies conditions requiring pre-arrival instructions*
- *Helps responders address the scene*
- *Helps you provide scene safety*

Proper Dispatch Involves...

- *Alerting appropriate resources*
- *Relaying information to responders*
- *Helping responders locate victim*
- *Establishing communication links*

Why the EMD Is Important

- *First medical contact caller has*
- *Only person with immediate understanding of resources available and their capabilities*
- *In best position to determine need of patient*
- *Able to initiate telephone CPR within first 2 minutes*

Giving Good Telephone Instructions

- *Refine interrogation skills*
- *Familiarize yourself with cardiac arrest as a medical emergency*
- *Practice giving medically approved protocol for the emergency*
- *Practice overcoming the "hysteria threshold" and "repetitive persistence"*
- *Deliver instructions in calm and reassuring manner*

Communication Skills

- *Be calm and reassure callers*
- *Be quick*
- *Be clear*
- *Ask only necessary questions*
- *Repeat questions only when caller did not understand you or did not give you useful information*
- *Be alert to caller responses*
- *Be willing to give assistance*

Housekeeping Hints

- *Keep EMDPRS close at hand*
- *Follow protocols "word-for-word"*
- *If you get the call from another agency then get the phone number of the residence and CALL BACK!!*

MODULE 3
Introduction to The EMDPRS and 32 Chief Complaint Types

TRAINEE TEXT

MODULE OVERVIEW

The major "tool of the trade" for EMDs is the Emergency Medical Dispatch Protocal Reference System (EMDPRS). Understanding the layout and design of the EMDPRS is essential to helping you do your job in the most effective manner. It is important to also understand the general medical content represented by the thirty-two chief complaint types covered here. The medical content of these thirty-two chief complaints covers information that should be contained in every EMDPRS. It is important to note, however, that not all EMDPRS ***have*** thirty-two chief complaints.

Module 3, Introduction to The EMDPRS and 32 Chief Complaint Types, introduces you to the basic layout and structure of EMDPRS protocol cards. You will learn about the three types of protocol cards, major groups of information, and you will be introduced to your local EMDPRS and its structure.

This module also covers the major chief complaint types. You will learn about the three categories of complaints (based on the medical event) and then proceed to learn about the thirty-two complaint types that are used to develop the protocols. Also presented is the major medical information that you need to learn about each, including any special pediatric considerations you should know.

Module 3 contains the following Units:

Unit 1: *Introduction to the EMDPRS*

Unit 2: *Introduction to the 32 Chief Complaint Types*

INSTRUCTOR NOTES

<TG PAGE 3-1>

Introduce the module.

State the module units.

MODULE 3
Introduction to The EMDPRS and 32 Chief Complaint Types

TRAINEE TEXT	INSTRUCTOR NOTES
MODULE OBJECTIVES	
Upon completion of this module, you will be able to:	**State** the module objective(s).
1. Identify the three categories of protocols within an EMDPRS.	
2. Identify the design components of each protocol within the EMDPRS.	
3. Explain the purpose and kinds of information found in each of the components of the protocols of an EMDPRS.	**<TG PAGE 3-2>**
4. Discuss/identify the categories of medical complaint types.	
5. Describe the contents and structure of an EMDPRS.	
6. Demonstrate use of each of the thirty-two chief complaint cards using your locally approved EMDPRS.	
MODULE DURATION	
Minimum 12 hours.	For instructor information only.

MODULE 3
Unit 1 Instructor Preparation

Following are a list of questions and/or topics which appear in Unit 1, for trainees to answer and discuss. Although information is provided in the Trainee Guide and Instructor Guide, you should be prepared to discuss these questions/topics and give additional information and examples, based on local agency guidelines and your experience.

1. Discuss the basic types of information and design components of an EMDPRS. (Be prepared to review the types of EMDPRSs used by local agencies in your region.)

2. Be sure to emphasize the importance of the Initial Survey/All-Caller Interrogation card.

3. Stress getting a "call-back" number and why it is important.

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Module 3 - Unit 1
Introduction to the EMDPRS

TRAINEE TEXT

UNIT OVERVIEW

Aside from good telecommunications skills, good judgment and satisfactory operational equipment, the most important tool available to the EMD is the Emergency Medical Dispatch Protocol Reference System, aka EMDPRS.

Unit 1, Introduction to the EMDPRS, teaches you to understand the basic concepts behind the development and arrangement of information in the EMDPRS. You will learn that all EMDPRSs contain basically the same types of information, and in relatively the same order. By learning the types of information found in an EMDPRS, you will be able to quickly understand and use *any* EMDPRS.

UNIT OBJECTIVES

Unit Learning Objectives

Upon completion of this unit, you will be able to:

1. Identify the three categories of protocols within an EMDPRS.
2. Identify the design components of each protocol within the EMDPRS.
3. Explain the purpose and kinds of information found in each of the components of the protocols of an EMDPRS.

INSTRUCTOR NOTES

<TG PAGE 3-3>

Introduce the unit.

State the unit learning objective(s).

Module 3 - Unit 1
Introduction to the EMDPRS

TRAINEE TEXT	INSTRUCTOR NOTES

Enabling Learning Objectives

To meet the unit learning objectives, you will:

1.1 Identify the three types of protocols within an EMDPRS.

1.2 Describe the differences in content between the three types of protocols within an EMDPRS.

2.1 List and describe the major sections of protocols within an EMDPRS.

3.1 Describe the types of information gathered or provided, for each section, for each of the three types of protocols within an EMDPRS.

<TG PAGE 3-4>

TRAINEE TEXT	INSTRUCTOR NOTES
Introduction to EMDPRS Structure and Layout	**<TG PAGE 3-5>**
The Emergency Medical Dispatch Protocol Reference System (EMDPRS) is frequently referred to as "guidecards, protocol cards, scripts or cards."	**Introduce** the unit.
Every agency has its own set of locally medically approved protocols. Their structure and contents vary from agency to agency, but overall they tend to contain similar information. It is up to you to practice regularly with the EMDPRS used by your agency.	**Tell** trainees that each agency has its own set of locally approved protocols.
NOTE: This unit illustrates the types of information found on most EMDPRS cards. ***The EMDPRS sample pages you will receive while training on this unit are generic and are not approved for use once you return to your agency.*** Locally approved cards will be reviewed at the end of this unit.	**Hand out** sample EMDPRS pages and tell trainees that these are only samples and not approved for use back at their sites. These are found at the end of this unit.
EMDPRS protocols are designed to present medical information in a logical and structured sequence. The order in which the information is shown on protocols will vary, based on the information that your local medical advisory personnel determines to be most important.	**Tell** trainees that the EMDPRS is arranged logically, to present a structured sequence.
Descriptions of Three Protocol Types. Generally, all EMDPRS contain, at a minimum, three protocol types. Each of these protocols is designed to meet a specific need. These needs are described on the following pages. The protocol types are as follows:	**<TG PAGE 3-6>**

TRAINEE TEXT	INSTRUCTOR NOTES
1. **The Initial Survey/All-Caller Interrogation Protocol.** This protocol is used to conduct the initial questioning of all callers, in an effort to gather criteria that help you to focus your information gathering activities.	**Show** Figure 3-1-1. **Describe** the Initial Survey/All-Caller Interrogation protocol.
The initial survey protocol lists the questions to be asked of ***every*** caller. Questions are used to gather ***location*** (including telephone number) and ***patient status information*** (like patient age, status of breathing and level of consciousness). The information you get from the caller forms the basis for dispatch, information dissemination and further inquiry (as indicated by the EMDPRS).	
It is very important that you use this card for evey call you take. This card points you to the proper protocol card and helps you focus the caller. It is the very first step in getting the *Where, What, How, Who, When* information you need for effective dispatch.	**Stress** the importance of using this card for every call.
Initial Survey ‣ Used to conduct initial questioning of caller ‣ Asked of every caller ‣ Location and Chief Complaint Data 3-1-1	**<TG PAGE 3-7>** **Show** Figure 3-1-2.

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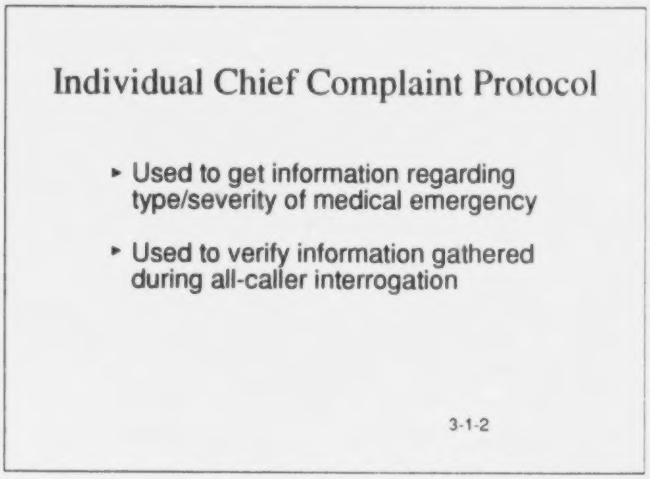
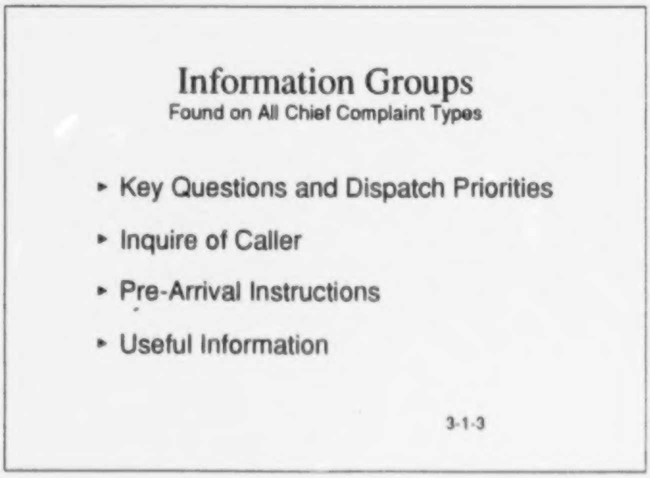
TRAINEE TEXT	INSTRUCTOR NOTES
2. **The Individual "Chief Complaint" Protocol.** The individual "chief complaint" protocol is used to get information from all callers regarding the type and severity of medical emergency being reported. The individual "chief complaint" protocol is used by EMDs to verify (and get more) information on the chief medical complaints being reported by callers.	**Describe** the Individual "Chief Complaint" Protocol.
 Individual Chief Complaint Protocol ▸ Used to get information regarding type/severity of medical emergency ▸ Used to verify information gathered during all-caller interrogation 3-1-2	**<TG PAGE 3-8>**
NOTE: Experience indicates that the information found in the thirty-two chief complaint types discussed during this training represent the majority of emergency medical conditions that are likely to be reported by callers. Remember, many programs will have different groupings of these thirty-two chief complaint types.	**Tell** trainees that it is generally accepted that there are 32 basic chief-complaint types. Not all agencies use thirty-two; some have more while others may have less and that it is a locally decided issue.

TRAINEE TEXT	INSTRUCTOR NOTES
Information found in each of the thirty-two chief complaint protocols. Each of the thirty-two protocols contains four major design components:	**Show** Figure 3-1-3. **List and describe** the four major design components of the chief complaint protocols.
a) *Key Questions and Inquire of Caller.* The purpose of these two sections is to gather additional, specific information not received or asked for by the initial survey protocol.	1. Key Questions/Inquire of Caller
The "Key Questions" section lists important questions that you need to ask in order to gather additional medical information about the patient's condition.	**<TG PAGE 3-9>**
The "Inquire of Caller" section is used to help guide callers into giving you better, clearer information. Caller responses to these questions give you the information you need to determine the appropriate telephone medical instructions to give callers when (and if) required.	
b) *Dispatch Priorities (aka "Medical Dispatch Criteria").* The "Dispatch Priorities" section identifies the proper types of response allocations that are appropriate to the situation. Responses are prescribed and approved by the local Medical Director.	2. Dispatch priorities
NOTE: You should be able to dispatch the proper medical response to the scene based on the information gathered in the "Key Questions" section.	**Tell** trainees that they should be able to dispatch resources based only on the information gathered through the "Key Questions" section.

TRAINEE TEXT	INSTRUCTOR NOTES
c) *Pre-Arrival Instructions.* The purpose of this section is to list the basic information that you should give callers. It does not include medical instructions. It also helps you prepare callers for the arrival of the medical personnel you dispatched.	3. Pre-arrival instructions
d) *Useful Information.* This section gives you additional information about the medical situation including insights and possible complications.	4. Useful Information
NOTE: The information in the "Useful Information" section is designed specifically to expand your knowledge, relative to the chief complaint type being reported by the caller. It is not intended to be shared with callers.	**<TG PAGE 3-10>** **Tell** trainees that the information found in the Useful Information section is designed for the EMD's benefit and generally isn't shared with the callers.

An example of the Individual "Chief Complaint" Protocol is the ABDOMINAL PAIN/INJURY card.



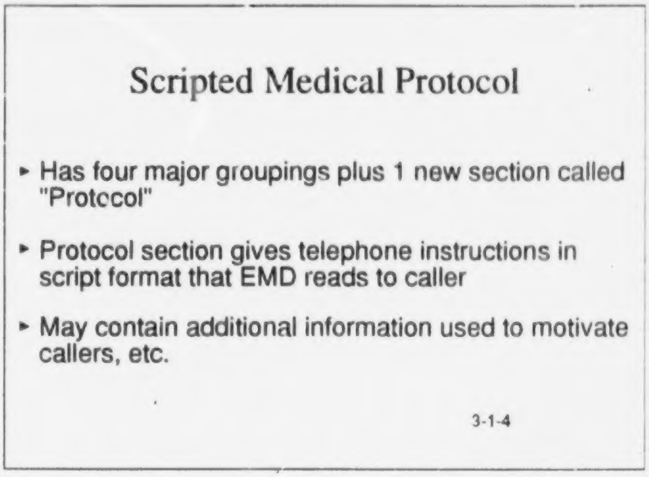
Information Groups
Found on All Chief Complaint Types

- Key Questions and Dispatch Priorities
- Inquire of Caller
- Pre-Arrival Instructions
- Useful Information

3-1-3

TRAINEE TEXT	INSTRUCTOR NOTES
3. **The "Scripted Medical Protocol."** The "scripted medical protocol" is a special type of protocol. These protocols give scripted telephone medical instructions (i.e. - protocols) that you are supposed to give to callers when immediate care needs to be given to victims in order to save their lives. These must be read aloud to the caller, word-for-word. The instructions that you give callers help them apply life-saving treatments to the victim prior to the arrival of dispatched responders.	**Describe** the scripted medical protocol.
Examples of the scripted medical protocol are the **CPR, CHOKING, CHILDBIRTH and AIRWAY MANAGEMENT** cards. These protocols contain the scripts you would use to provide telephone medical instructions to callers in this situation.	**<TG PAGE 3-11>** **Give examples** of scripted medical protocol cards (CPR, Childbirth, Choking, Airway Management).
The scripted medical protocol may include additional information that can help you motivate and encourage callers to follow the instructions, to describe precautions callers should take and describe signs that callers can look for while administering telephone directed medical treatment provided by the EMD.	

TRAINEE TEXT



Scripted Medical Protocol

- Has four major groupings plus 1 new section called "Protocol"
- Protocol section gives telephone instructions in script format that EMD reads to caller
- May contain additional information used to motivate callers, etc.

3-1-4

Summary

This unit has introduced you to the basic design and structure of an EMDPRS. You have been trained on the three card types (All-Caller Interrogation, Individual "Chief Complaint" Protocol, and Scripted Medical Protocol) and the major sections of the cards. This unit also trained you on the information types found in each section of a card.

Remember, the cards you use back at your site must be approved by the medical director of your EMS system.

The next unit introduces you to the thirty-two chief complaint types. Module 3, Unit 2 provides you with basic medical information for each complaint type. Also, you will be trained on the use of your local medical protocol card for each complaint type.

INSTRUCTOR NOTES

<TG PAGE 3-12>

Review the unit. Ask for (and answer) trainee questions.

Initial Survey

- *Used to conduct initial questioning of caller*
- *Asked of every caller*
- *Location and Chief Complaint Data*

Individual Chief Complaint Protocol

- *Used to get information regarding type/severity of medical emergency*
- *Used to verify information gathered during all-caller interrogation*

Information Groups

Found on All Chief Complaint Types

- *Key Questions and Dispatch Priorities*
- *Inquire of Caller*
- *Pre-Arrival Instructions*
- *Useful Information*

Scripted Medical Protocol

- *Has four major groupings plus 1 new section called "Protocol"*
- *Protocol section gives telephone instructions in script format that EMD reads to caller*
- *May contain additional information used to motivate callers, etc.*

MODULE 3
Unit 2 Instructor Preparation

Following are a list of questions and/or topics which appear in Unit 2, for trainees to answer and discuss. Although information is provided in the Trainee Guide and Instructor Guide, you should be prepared to discuss these questions/topics and give additional information and examples, based on local agency guidelines and your experience.

1. Review the 32 chief complaint types and have local EMDPRS protocols available to use in class. (If trainees are from many different agencies, you might consider using multiple instructors and breaking the class into groups, so trainees from each agency have a chance to review the protocols used by their agency.)

2. Be sure to cover any specific pediatric considerations that are listed for each chief complaint.

Module 3 - Unit 2
Introduction to the 32 Chief Complaint Types

TRAINEE TEXT

UNIT OVERVIEW

Your position as an EMD requires familiarity with a large number of medical complaints. Experience indicates, however, that there are generally thirty-two complaints that occur most frequently.

Unit 2, Introduction to the 32 Chief Complaint Types provides you with general medical information about the thirty-two chief complaint types. You will review the information provided in this trainee guide ***and*** the information found in your locally approved EMDPRS.

UNIT OBJECTIVES

Unit Learning Objectives

Upon completion of this unit, you will be able to:

4. Discuss/identify the categories of medical complaint types.
5. Describe the contents and structure of an EMDPRS.
6. Demonstrate use of each of the thirty-two chief complaint cards using your locally approved EMDPRS.

Enabling Learning Objectives

To meet the unit learning objectives, you will:

4.1 Identify the thirty-two chief complaint types.

INSTRUCTOR NOTES

<TG PAGE 3-13>

Introduce the unit.

State the unit learning objective(s).

TRAINEE TEXT	INSTRUCTOR NOTES
4.2 Define/discuss the difference between a medical chief complaint, a traumatic chief complaint type and a time/life-critical chief complaint type.	
4.3 Discuss the difference between signs and symptoms.	
4.4 Describe how to identify "chief complaints."	**<TG PAGE 3-14>**
5.1 Discuss the purpose/focus of the questions for each category of chief complaint type (medical vs. traumatic vs. time/life-critical events).	
6.1 Demonstrate using the EMDPRS with a call about a specific complaint type.	
6.1.1 Identify critical elements in cardiac arrest survival.	
6.1.2 Describe the role of the EMD in providing telephone CPR.	

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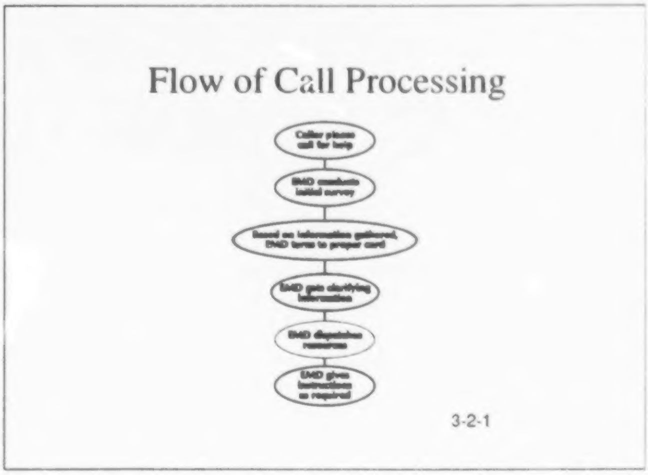
TRAINEE TEXT	INSTRUCTOR NOTES
Introduction to The Chief Complaints	**<TG PAGE 3-15>**
A Quick Review of Important Concepts	**Show** Figure 3-2-1.
Overview of The Process. As you have already learned, every caller undergoes some sort of initial questioning to identify if the patient is conscious and/or breathing. In some systems this is called the *"Initial Survey,"* the *"All-Caller Interrogation"* or *"Entry Level Interrogation."*	**Review** the EMD Process.
Normally the process begins with the initial survey. This initial survey and the answers you receive from the caller direct you to the proper individual chief complaint card, which is followed by specific key questions as directed by the card. Once you get this information, you can make a decision on unit response configuration and mode and dispatch units to the scene. You can now return to the caller and begin the pre-arrival (post-dispatch) instructions required for the situation at hand.	1. Starts with Initial Survey.
After the location and call-back number have been determined, you continue the initial assessment and get the patient's age, status of consciousness and status of breathing. If the patient is conscious or unconscious and breathing, the dispatcher immediately knows that the patient is alive and now has a little more time to get specific information from the caller about the patient's condition. This enables you to send resources in the proper response configuration and mode. This also allows you to give the caller accurate and useful pre-arrival (post-dispatch) instructions.	2. After location and call-back is checked; get conscousness and breathing status.
If the patient is unconscious and not breathing, or if the patient is unconscious and the caller can't tell if the patient is breathing or not, you should assume a possible cardiac arrest situation exists and turn immediately to the appropriate protocol for the provision of CPR.	3. If patient is unconscious or not breathing, go to CPR card.

TRAINEE TEXT	INSTRUCTOR NOTES
The CPR protocol has clear and understandable instructions that take the caller through airway interventions prior to the provision of chest compressions. If the patient has merely choked and is not in cardiac arrest, you need to provide the instructions for choking intervention rather than CPR. The design of the protocol guides you through this process.	**<TG PAGE 3-16>**
 Flow of Call Processing Caller places call for help EMD conducts initial survey Based on information gathered, EMD turns to proper card EMD gets clarifying information EMD dispatches resources EMD gives instructions as required 3-2-1	
Caller emotional status. Remember that the caller's emotional status is not a clear indication of the medical problem's severity. You must adhere to the questions found on the protocol and make decisions based on the symptoms that are reported and the existence (or absence) of symptoms that indicate the need for a high priority response.	**Review** this "caller emotional status" paragraph. Tell trainees that emotional state is not indicative of the problem severity.
The most common high-priority symptoms included in the majority of EMDPRS are chest pain, breathing problems, altered levels of consciousness and, in some cases, severe hemorrhage. In most cases, when these symptoms are reported, you will initiate a high level ALS response due to the potential severity of the situation.	

TRAINEE TEXT	INSTRUCTOR NOTES
Signs and Symptoms. As you may recall from Module 1, there is a difference between *signs* and *symptoms.* Signs are things that are found upon examining the patient. Examples of signs include thready pulse, spurting blood, cyanosis (turning blue) and diaphoresis (sweating). Symptoms are things that the patient complains of that s/he is feeling. Examples of symptoms include *"I'm hot/cold," "I'm having a hard time breathing"* and *"I can't feel my toes."*	**<TG PAGE 3-17>** **Review** signs and symptoms.
Identifying the Chief Complaint. This is part of the "initial survey." It is important to remember that the chief complaint is that which is most paramount on the patient's (or caller's) mind. Patients with multiple complaints will most frequently identify the chief complaint first and then go on to list the secondary complaints, many of which will be symptoms of the chief complaint. Asking "What's wrong?" often confuses the caller and causes them to assume you are asking for a diagnosis. Ask questions that elicit short and descriptive responses from the caller. They are your eyes at the scene, so ask them "What do you see? Tell me what is happening!" When a caller presents you with multiple chief complaints that seem to have no relationship with each other, you need to select the one that has the most potential to worsen or that has the highest priority symptoms.	**Review** the chief complaint identification.
The Flow of Call-Processing. Your call-processing should follow a smooth pattern and logical flow. Normally the process begins with initial entry-level questioning, followed by specific key questions. Once this information is obtained the EMD can make a decision on unit response configuration and mode and dispatch units to the scene. The EMD can now return to the phone and begin the pre-arrival (post-dispatch) instructions required for the situation at hand.	**Review** call processing flow.

Module 3 - Unit 2

Introduction to the 32 Chief Complaint Types

TRAINEE TEXT	INSTRUCTOR NOTES
Prior to terminating the phone call with the caller, the EMD should ensure that the patient has a clear airway and is breathing. You should also instruct the caller to turn patients gently on their side if they should vomit (unless spinal injury is suspected). In minor or less urgent cases, you need to tell the caller to call back if the patient's condition changes before help arrives.	**<TG PAGE 3-18>**
Medical Complaint Types: Individual Chief Complaints, Traumatic Incidents and Time/Life-Critical Events	
Generally speaking, there are two medical complaint types; *Individual Chief Complaints* and *Traumatic Incident Types.* In most cases, the calls you receive fall into these two categories. However, there is a subset of these calls that are also very important for you to know and understand. This subset is called the *Time (or Life) Critical Events.*	**Show** Figure 3-2-2. **Introduce** the two major medical complaint types.
Individual Chief Complaints. It is common to assume that all reported problems are individual chief complaints. In some respects that is the case. However, in the field of emergency medical dispatch, there is a distinction between individual chief complaints and traumatic incidents.	
Individual chief complaints typically are general medical problems. A medical problem is generally defined as "an illness, either acute or chronic." Proper response and pre-arrival instructions in these cases is based on your ability to gather information regarding: 1. the patient's chief complaint; 2. the patient's age;	**Introduce** the "individual chief complaint types." **Explain** the difference between acute or chronic, as needed.

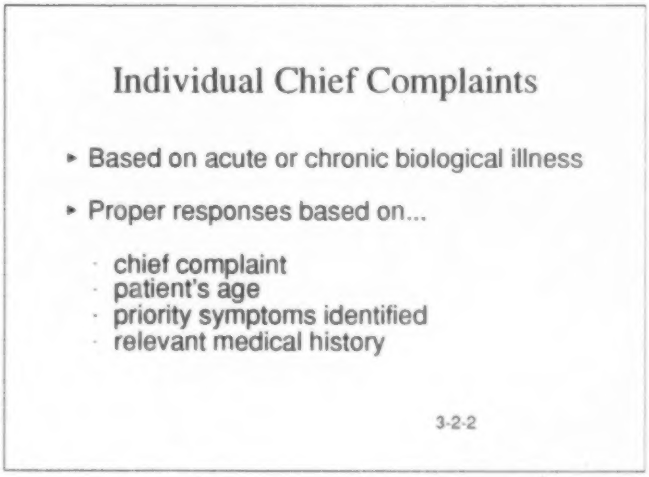
TRAINEE TEXT	INSTRUCTOR NOTES

<TG PAGE 3-19>

3. the patient's *priority* symptoms (if present) such as severe bleeding, decreased levels of consciousness, respiratory difficulty and chest pain and
4. any patient medical history that is relevant to the situation at hand.

The focus of your questioning is on the existence or lack of priority symptoms most often associated with that particular chief complaint type. In addition, the patient's medical history and age are factors in determining the potential severity of the problem.

Pre-arrival (post-dispatch) instructions in these cases relate primarily to keeping the patient's airway clear, keeping the patient comfortable, gathering patient medications and advising the caller to call back if the patient's condition changes before help arrives.



Individual Chief Complaints

- Based on acute or chronic biological illness
- Proper responses based on...
  - chief complaint
  - patient's age
  - priority symptoms identified
  - relevant medical history

3-2-2

<TG PAGE 3-20>

Review "traumatic incident types."

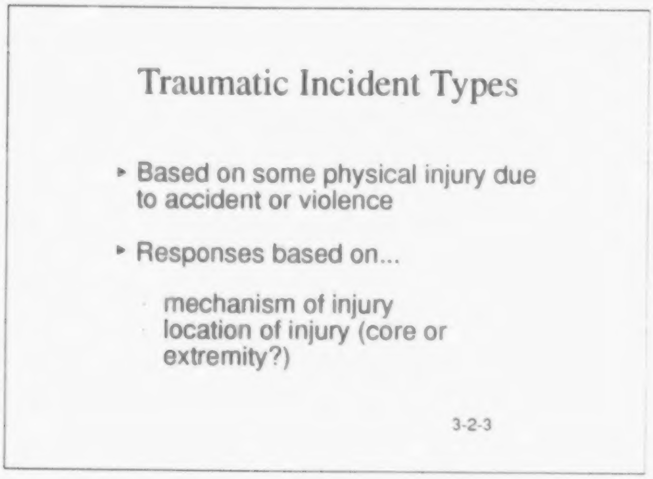
Traumatic Incident Types. Trauma is generally defined as "some physical injury caused by accident or violence." Proper response and post-dispatch instructions in these cases rely on your ability to gather information regarding the nature of the incident type

TRAINEE TEXT	INSTRUCTOR NOTES
(aka "mechanism of injury"), where the injuries are (core of the body or extremities?) and the identification of priority type symptoms.	**Show** Figure 3-2-3.
Trauma denotes a situation in which a patient has sustained some injury either by accident or violence. The chief complaint is usually reported in the form of a verb (he got hit, shot, cut, etc.) or by a description of the mechanism of injury (an auto pedestrian accident, he fell off the roof, etc.).	
Traumatic incident types should be assessed differently by EMDs than individual chief complaint types, because the factors used to determine response levels are different. Studies have shown that the following are the primary determining factors in response when dealing with traumatic incidents:	
1. the mechanism of injury;	
2. where the injury is located (central or peripheral, torso or arms and legs) and	
3. significant priority symptoms (usually altered levels of consciousness indicative to the onset of shock, a head injury, or an underlying medical problem; severe hemorrhage or breathing problems associated with injuries to the central core).	
Pre-arrival (post-dispatch) instructions vary widely, based on the situation and complaint type reported. They include the same instructions in many cases as the individual chief complaints, especially as they relate to airway control. However, traumatic incident protocols include more specific injury-related instructions. These directions are designed to protect the patient from receiving further injury from a well-meaning, but untrained, bystander who attempts to help.	**<TG PAGE 3-21>**
Pre-arrival (post-dispatch) instructions in these cases relate primarily to ensuring the safety of the scene (patients, bystanders and responders). Instructions are provided for the control of external bleeding, ensuring	

TRAINEE TEXT	INSTRUCTOR NOTES
the patients airway is clear, advising the caller when it may be best to do nothing, advising the caller to guide the units to the patient and advising the caller to call back if the patient's condition worsens.	
Specific Pediatric Considerations (Traumatic Incident Types). Accidents are the most common cause of death in childhood, killing more children than cancer, meningitis, congenital defects, and heart disease combined. Over ***three thousand*** deaths per year occur in infants (under the age of one) from falls, burns, drowning, choking and suffocation. For every accidental death, one hundred children are seriously injured.	**Review** specific pediatric considerations that relate to traumatic incident types.
Traumatic incident types are by far the most common chief complaint grouping used to report incidents involving children. With regard to CPR and choking interventions, children should be defined clearly as an infant (0-1years old); child (1-8 years old); or adult (> 8 years old) according to the American Heart Association and the American Red Cross. These conventions should be considered when your agency is developing continuing education or conducting initial training.	**Ask** trainees to identify other pediatric considerations they may know about.
In cases of traumatic injury the child should not be moved unless in danger. A common error made at the scene of an injury is for the caller to move or pick up the child, run into the house or shelter and hold the child to comfort him/her. This can prove to be devastating to the child with spinal injuries which can be worsened when the child is being moved by concerned but untrained bystanders. If the child has gotten up and run into the house, she should lie down on a flat surface and be comforted while being kept still and reassured by bystanders.	
A spinal cord injury should be suspected if there is any indication of:	**<TG PAGE 3-22>**
1. severe facial or head injuries;	**Tell** trainees when to suspect pediatric spinal cord injuries.

TRAINEE TEXT	INSTRUCTOR NOTES
2. unconsciousness reported associated with the incident; 3. numbness, tingling or loss of sensation in any extremity(ies); 4. paralysis or inability to move any extremities; 5. pain in back upon movement or attempt to move or 6. any motor dysfunction reported by the caller.	
Children may have critical injuries, but the symptoms may remain hidden until the child reaches a point of rapid deterioration. Critical symptoms such as low blood pressure do not appear as rapidly in children as they do in adults. Other symptoms like breathing and pulse may be difficult to interpret in a child who is hurt or frightened. If priority symptoms are present, time is critical and the child must be taken immediately for care.	
Conscious injured children require extra attention, support and reassurance, preferably from a single consistent bystander. This must be communicated through the EMD to the bystander.	**Tell** trainees that children require extra attention.
Remember, *the emotional condition of the patient and/or caller should not be used as indicator of the severity of the problem.* Lacking experience and knowledge, children may not understand the severity of an incident and may appear to be very calm in the face of crisis. Likewise, bystanders and children may be distraught from witnessing the incident, reacting to the sight of blood or arms and legs bent at unnatural angles.	**Tell** trainees that EMDs should not use emotional status as a barometer of the problem's severity.
Prevention is the most powerful treatment for most childhood injuries. The EMD can play a role in injury prevention by recognizing and reporting traffic, playground or other hazards as they are identified in calls relating to childhood injuries.	**<TG PAGE 3-23>**

TRAINEE TEXT



Traumatic Incident Types

- Based on some physical injury due to accident or violence
- Responses based on...
  - mechanism of injury
  - location of injury (core or extremity?)

3-2-3

Time/Life-Critical Chief Complaint Types. These are a subset of individual chief complaints and traumatic incident types. They pose the greatest danger to the patient, bystanders and/or responders.

Care should be taken with these cases to ensure that appropriate pre-arrival (post-dispatch) instructions are given and that information regarding the safety of the scene is relayed to the responding units.

Calls of this type may be specifically medical in nature, like cardiac arrest, choking, childbirth, unconsciousness, CO poisoning/HAZMAT.

Others may have both types (traumatic and individual chief complaint) included in the problem. Examples include a drowning victim with respiratory difficulty and neck pain from a shallow water diving incident; an electrocution victim with possible internal burn who has fallen off the telephone pole and who also may have traumatic injuries from a long fall.

INSTRUCTOR NOTES

Review the time/life-critical complaint types protocol.

Show Figure 3-2-4.

Tell trainees these complaints represent the greatest danger to the patient and bystanders.

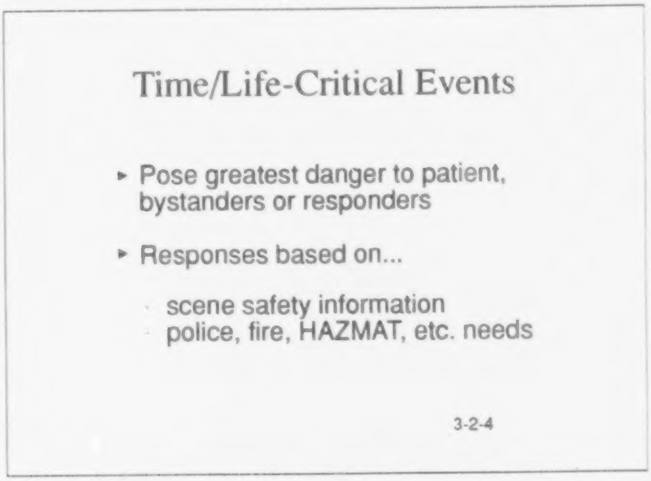
Tell trainees that it is vitally important to assure appropriate response to this complaint type.

<TG PAGE 3-24>

TRAINEE TEXT

Proper call handling relies on your ability to gather information about the chief complaint. It also requires that you gather information about the safety of the scene and other important factors that may require you to dispatch ancillary agencies (like police, fire and/or HAZMAT units).

Pre-arrival or post-dispatch instructions relate primarily to the scripted CPR, choking and childbirth instructions along with situational instructions for specific medical or traumatic incident types with a focus on scene safety.



Time/Life-Critical Events

- Pose greatest danger to patient, bystanders or responders
- Responses based on...
  - scene safety information
  - police, fire, HAZMAT, etc. needs

3-2-4

Philosophy of the Design and Use of the EMDPRS

This unit presents chief complaint information in the order described below. Chief complaints are alphabetized within each of the following groupings:

1. Traumatic Incidents;
2. Individual Chief Complaints and
3. Time/Life-Critical Events.

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INSTRUCTOR NOTES

Tell trainees that proper call handling relies on the ability to get information about the chief complaint, including any scene safety issues.

Review EMDPRS design/use philosophy.

<TG PAGE 3-25>

Tell trainees that they will review the chief complaints in the order of Traumatic Incident, Individual Chief Complaint, and Time/Life-Critical events.

TRAINEE TEXT	INSTRUCTOR NOTES
NOTE: In the "real-world," each EMDPRS may be arranged differently based on the decisions made by the local medical authority. In most EMDPRSs, complaint types are arranged alphabetically.	**Tell** trainees that EMDPRSs are ordered differently, based on the direction of local medical authority. In most cases, however, the EMDPRS is arranged alphabetically.
Philosophy of Use. When determining what an EMDPRS should look like or how it should be used, medical advisors consider the following questions. Should my EMDPRS be a strict protocol or a dispatch guideline? Should we mandate its use or make it optional?	
In your area, use of the EMDPRS may vary from someone who works in another agency or city. It is up to you to be aware of the policies your agency has set up for using the locally approved EMDPRS.	**Tell** trainees that EMDPRSs will vary from agency to agency.
Design Philosophy. In Unit 1 of this Module you were presented information on the design of EMDPRSs and were also given the opportunity to study the structure of your local EMDPRS. The major elements presented were:	**Review** the major elements of EMDPRS design.
1. the Initial Survey/All-Caller Interrogation;	
2. the Individual Chief Complaint Protocol;	
a. the "Key Questions" sections of a protocol and the information found there;	
b. the "Dispatch Priorities" section of a protocol and the information found there;	
c. the "Protocol" section that is found only on "Scripted Medical" protocols, and the information found there;	
d. the "Additional Useful Information" section and the information found there and	**<TG PAGE 3-25>**

TRAINEE TEXT

3. the Scripted Medical Protocol.

Specific design characteristics of the EMDPRS. The EMDPRS is designed to maximize EMDPRS use and flow. The EMDPRS determines:

1. the **order** that various actions are taken by the EMD;
2. when the EMD is to dispatch resources;
3. the **mode** (Hot vs. Cold) and **configuration** (Type of Unit or Units) of the response and
4. when the EMD is to provide instructions.

EMDPRS Determines...

- Order of EMD actions
- When to dispatch resources (types and configurations included)
- Assigns mode and configuration to responding personnel
- Tells when to give telephone medical instructions
- Tells when/how to end the call

3-2-5

INSTRUCTOR NOTES

Show Figure 3-2-5. Review the specific design characteristics of the EMDPRS.

Tell trainees that EMDPRS determines the order actions are taken, when to dispatch, mode and configurations of responses and when EMDs are to give medical instructions to callers.

TRAINEE TEXT

Detailed Review of the Thirty-two Chief Complaint Types

Traumatic Incident Types. Following is a detailed review of the eleven Traumatic Incident Type protocols. Your instructor will provide additional information about these, and then you will be given the opportunity to practice using your local EMDPRS protocol for the given chief complaint.

INSTRUCTOR NOTES

<TG PAGE 3-27>

Review the 32 chief complaints. See IG NOTE #1 for helpful hints, p. 3-135 of this guide.

Review each of the following traumatic incident types.

We suggest you review each traumatic incident type by going over the:

1. background;
2. common causes;
3. common symptoms reported;
4. instructions usually given and
5. any special pediatric considerations the EMD should know.

Once you've reviewed these points (for each complaint type), review EMDPRS protocols for the members of your class.

If trainees represent many different agencies, you might consider using multiple instructors and breaking the class into groups where EMDPRSs can be reviewed individually.

TRAINEE TEXT

1 - Animal Bites (Traumatic Incident Type)

1. Background:

    a. Except in rare instances, animal bites are non-urgent in nature. There are some critical situations that can be identified with proper questioning from the EMD using the EMDPRS.

    b. Identification of high level emergencies rely on the identification of severe bleeding, the site of the bite and the level of consciousness of the patient.

    c. Animal control should be contacted to attempt to identify and quarantine the animal.

    d. It is important to determine the type of animal and where the animal is at the time of the call.

2. Common Causes:

    a. The most common animal bite is a dog bite. However, many individuals are bitten by unusual or exotic animals they may have as pets.

    b. In some areas of the country, snake bites are fairly common.

3. Common Symptoms Described by Caller (presentation)

    a. Solitary bites, often without serious bleeding.

INSTRUCTOR NOTES

Review the Animal Bites complaint type.

<TG PAGE 3-28>

TRAINEE TEXT	INSTRUCTOR NOTES
4. Instructions Commonly Provided:	
a. Monitor and maintain patients airway, especially if patient is nauseated or vomiting.	
b. Treat for shock:	
1) Control bleeding.	
2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS; allow patient to assume a comfortable position.	
3) Keep patient warm.	
4) DO NOT GIVE PATIENT FOOD OR DRINK.	
c. Control bleeding with direct pressure.	
d. Call back if the patient's condition changes before help arrives.	
e. For snake bites, DO NOT ELEVATE THE BITTEN AREA, DO NOT USE ICE and DO NOT ATTEMPT TO REMOVE VENOM IN ANY WAY. Reassure caller that most snake bites are not life-threatening.	
f. Regardless of how minor the bite seems to be, patients should be advised to seek medical attention.	**<TG PAGE 3-29>**
g. Lock all pets away because they may interfere with instructions given or attack responding personnel.	

TRAINEE TEXT	INSTRUCTOR NOTES

5. Special Pediatric Considerations:
    a. Children are common victims of pet bites, and their smaller size and uncontrolled reactions to animals make them more likely than adults to suffer serious facial injuries.

    b. In situations where envenomation (venom injected into bloodstream) is possible through snake, fire ant, scorpion and spider bites, children will commonly suffer more severe reactions, including death, than will adults.

2 - Assault/Sexual Assault (Traumatic Incident Type)

Review the Assault/Sexual Assault complaint type.

1. Background:
    a. These chief complaints often pose a danger to the responders and the bystanders as well.

    b. Sexual assaults often are accompanied by traumatic injuries. The EMD should assume there are physical injuries in these cases.

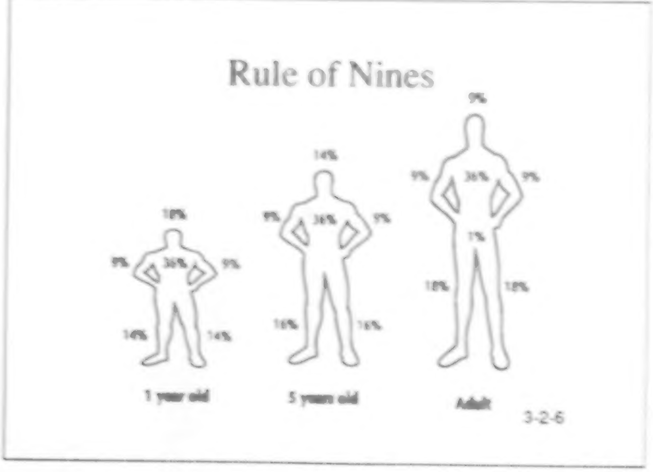
    c. The victim should be protected from further injury if possible.

    d. Information should be relayed to responding crews regarding scene security, particularly if the assailant is nearby. In these cases, responders should be advised to stay away until the police secure the scene and the evidence.

<TG PAGE 3-30>

TRAINEE TEXT	INSTRUCTOR NOTES
e. **PRESERVATION OF EVIDENCE**. The EMD should advise callers **not** to bathe or shower, change clothes, and not to eat or drink anything until help arrives and gives them instructions.	**Point** out the importance of evidence preservation.
f. In cases of sexual assault, Crisis Intervention counselors should be notified per departmental standard operating procedures (SOP).	
2. Common Causes: Self Explanatory	
3. Common Symptoms Described by Caller (presentation)	
a. Often the caller exhibits a high emotional content due to the frightening nature of the situation. Compassion and patience should be exercised by the EMD.	
b. Psychological and/or physical injuries present.	
c. Facial injuries commonly accompanied by severe bleeding.	
4. Instructions Commonly Provided:	
a. Monitor and maintain patient's airway, especially if patient is unconscious, nauseated or vomiting.	
b. Treat for shock:	**<TG PAGE 3-31>**
1) Control bleeding.	
2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.	
3) Keep patient warm.	

TRAINEE TEXT	INSTRUCTOR NOTES
4) DO NOT GIVE PATIENT FOOD OR DRINK.	
c. Control bleeding with direct pressure.	
d. Call back if the patient's condition changes before help arrives.	
e. Lock all pets away because they may interfere with instructions given or attack responding personnel.	
5. Special Pediatric Considerations:	
a. Most pediatric cases of assault/sexual assault are reported as child abuse situations. Twenty-five percent of child abuse cases involve patients under the age of two leaving seventy-five percent in all other age groups up to the age of sixteen. Twenty percent of physically abused children are permanently injured.	
b. Intentionally inflicted injury is one of the leading causes of death in children under 5, with over 2000 deaths annually in the US. However, the call to EMS will rarely describe the incident as assault or abuse. EMS providers should therefore always be alert to the possibility that what appears to be an accidental injury in a young child may have in fact been inflicted. Pediatric cases of assault/sexual assault should be reported as child abuse. In most states EMS providers are considered mandated reporters of suspected child abuse or neglect and as such, in most states, are protected against charges of libel when reporting suspected child abuse.	**<TG PAGE 3-32>**

TRAINEE TEXT	INSTRUCTOR NOTES
3 - Burns (Traumatic Incident Type) 1. Background: a. There are various types of burns encountered in EMS including thermal burns, chemical burns and electrical burns. b. The size and severity of the burn usually determines the level of emergency represented by a particular incident. c. The size of a burn is usually based on the total body surface area that has been affected. This is done in multiples of nine commonly referred to as the "Rule of Nines." Usually, second-to-third degree burns over twenty-percent of the body warrant emergency responses.	**Review** the Burns complaint type.
Look at **Figure 3-2-6**. The arms each represent about nine percent of total body area. The torso represents thirty-six percent of total body surface area (eighteen percent for the front - or chest area - and another eighteen percent for the back).	
	**<TG PAGE 3-33>** **Show** Figure 3-2-6.

TRAINEE TEXT	INSTRUCTOR NOTES
d. Burns are classified as first, second or third degree indicating the depth of the burn. First being sunburn like, second resulting in blistering and third involving all layers of the skin and underlying tissue. This is sometimes called a full thickness burn.	**Discuss** the "rule of nines."
e. The rule of nines does not accurately predict surface area of children under age eight. A useful estimate can be made by assuming that the palm of the child's hand approximates 1% of his/her body surface area; the burn size can then be estimated by the number of "hands" needed to cover the burn.	
f. Electrical burns should always be assumed to be worse than they appear on the surface, as internal burns may be present between the point of contact and the site where the electricity grounded out of the patient.	
g. Patients with facial burns (particularly thermal) should be monitored closely by the EMD for possible airway complications.	**<TG PAGE 3-34>**
h. It is important to determine if anything is still burning and if so, advise the caller to evacuate the dangerous area if safe to do so.	
i. In cases of burns that occur in enclosed areas, be aware of the possibility of carbon monoxide (CO) or other toxic poisoning/ inhalation.	
2. Common Causes:	
a. Thermal burns from a heat source.	

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   b. Chemical burns from an acid or lye compound.

   c. Electrical burns from an electrical source.

3. Common Symptoms Described by Caller (presentation)

   a. Burns are usually very painful as described by the caller.

   b. The caller may describe blistering or the peeling off of skin.

   c. Patients with electrical burns may be described as unconscious. If this is the case assume cardiac arrest and prepare to perform CPR.

4. Instructions Commonly Provided:

   <TG PAGE 3-35>

   a. Monitor and maintain patient's airway, especially if patient is unconscious.

   b. Cool small burns (ten percent or less total body area) with clean water.

   c. If the patient is still burning, extinguish flames with water or roll patient in a blanket or whatever is handy. DO NOT REMOVE BURNT CLOTHING.

   d. Do not apply anything to the burned area. Attempt to keep it clean and the patient covered.

   e. Continuously irrigate or flush all household chemical burns with water until help arrives.

   f. Caution caller to be aware of electrical hazards if electrical burn is reported. Be

TRAINEE TEXT	INSTRUCTOR NOTES
particularly aware of electrified water. If the patient is still in contact with the electrical source do not touch them.	
g. Treat for shock:	
1) Control bleeding.	
2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.	
3) KEEP PATIENT WARM (maintain body temperature).	
h. In cases of Industrial chemical exposure, contact HAZMAT resources according to local HAZMAT procedures.	**<TG PAGE 3-36>**
i. DO NOT GIVE THE PATIENT ANYTHING TO EAT OR DRINK. In cases of internal burns from a caustic ingestion from an acid or lye, advise giving the patient water to dilute the chemical if possible.	
j. Call back if the patient's condition changes before help arrives.	
k. Lock all pets away because they may interfere with instructions given or attack responding personnel.	
5. Special Pediatric Considerations:	
a. Electrical burns, chemical, thermal burns and scaldings are the most common burns in children.	
b. Scald burns common to the toddler aged child frequently cause more extensive damage than a similar burn in an adult or older child because the skin is thin. Scald	

TRAINEE TEXT	INSTRUCTOR NOTES
burns that blister initially like a second degree burn may in fact be subsequently revealed as third degree or "full thickness" burns.	
c. In addition to size and depth of the burn, other factors that contribute to the severity of burns in children include:	
1) the age of the child (worse outcome under 2 years)	
2) the location (hands, face, perineum may require specialized care)	**<TG PAGE 3-37>**
3) underlying medical conditions (diabetes, heart conditions, immune suppression)	
4) associated injuries	
5) intentional burns (abuse)	
d. If a flame or explosive burn occurred within a closed space, the possibility of thermal injury to the respiratory tract must be carefully evaluated. Signs include singed nasal hairs or soot in the sputum ("spit"). Symptoms include cough, wheezing, hoarseness, noisy or rapid breathing. Children with thermal injury to the airway may have rapid swelling resulting in partial or even complete airway obstruction and may need early and aggressive airway management by skilled providers.	
4 - Eye Problems/Injuries (Traumatic Incident Type)	**Review** the Eye Problems/ Injuries complaint type.
1. Background:	
a. The eye is a resilient structure made of very fibrous tissues. The globe of the eye is difficult to lacerate or penetrate. If the injury is a penetrating object, consider that it may have hit the eye	

TRAINEE TEXT	INSTRUCTOR NOTES

with sufficient force to go through the eye and into the cranium. This may result in an underlying head injury. If the level of consciousness is dropping or altered this should be suspected.

<TG PAGE 3-38>

b. The fluids in the eye are very fragile. If the eyeball is cut open or leaking fluid then it should not be touched or bandaged. The caller should be advised to not put direct pressure on the eye to arrest bleeding. The patient should sit up and be calmed until help arrives.

c. Chemicals and foreign bodies are common injuries to the eye. The eye should be irrigated with room temperature water until help arrives.

d. The caller should not attempt to remove any impaled objects in the eye. This may cause further damage to the eye.

2. Common Causes:

a. Severe eye injuries include penetrating wounds to the eye, lacerated eyes, retinal detachments and eye injuries associated with lowered levels of consciousness possibly indicative of an underlying head injury.

b. Common moderate eye problems include chemicals in the eye, arc welding burns and other thermal burns of the eye.

c. Minor eye problems include contact lens problems, foreign bodies, corneal abrasions and contusions from orbital fractures (fractures of the bones surrounding the eye).

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3. Common Symptoms Described by Caller (presentation)

   a. Severe pain and discomfort. This is particularly true with foreign bodies in the eyes.

   b. Bleeding is usually minimal unless surrounding facial trauma is associated with the injury.

   c. If the eyeball itself has been lacerated or punctured there may be a pinkish fluid leaking out of the eye. This may be the fluid within the eye and the caller should be advised to do nothing to treat this injury until help arrives. Tell the caller NOT to bandage the eye, or put any pressure on it.

   d. Penetrating object visible. Advise the caller not to remove the penetrating object.

4. Instructions Commonly Provided:

   a. Monitor and maintain patient's airway, especially if patient has lowered level of consciousness.

   b. Allow patient to assume a comfortable sitting position.

   c. If the patient has a small foreign body (like dust or small dirt particles) or a chemical in the eye, it should be irrigated until help arrives. Have the caller irrigate the eye under a steady stream of room temperature water and irrigate the eye with the injured eye downhill from the nose. If the eye is being irrigated outside with the water hose, advise the caller to run the water

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until any hot water in the hose has been flushed out to prevent further injury to the patient.	
d. If the eyeball is cut or leaking fluid it should not be touched, bandaged or otherwise disturbed by bystanders. The patient should be made to sit up and be calmed until help arrives.	**<TG PAGE 3-40>**
e. Treat for shock:	
1) Keep patient warm (maintain body temperature).	
2) DO NOT GIVE PATIENT FOOD OR DRINK.	
f. Call back if the patient's condition changes before help arrives.	
g. Lock all pets away because they may interfere with instructions given or attack responding personnel.	
5. Special Pediatric Considerations:	
a. A child with an isolated eye injury is best transported with a parent or other familiar adult to help maintain the position of comfort. Attempts to restrain the child may elevate intraocular pressure.	

TRAINEE TEXT	INSTRUCTOR NOTES
5 - Fall Victim (Traumatic Incident Type)	**Review** the Fall Victim complaint type.
1. Background:	
a. This protocol is useful for falls where back or other injuries have occurred.	
b. A long fall may be considered any fall that exceeds the height of the patient. Falls of greater than six feet are often considered long falls.	**<TG PAGE 3-41>**
c. With any long fall the EMD should suspect that a spinal injury exists and use spinal precautions in providing telephone aid.	
d. Long falls are usually third party in nature requiring the EMD to provide instructions through the third party.	
e. Falls may have been preceded by a medical incident. This information should be relayed to the responding personnel.	
f. The length of the fall is the easiest determinant of severity. The EMD must be mindful that external trauma as well as internal injury may exist.	
g. Any fall victim reported to be unconscious or with associated head or facial injuries should be assumed to have a spinal cord injury. Do not move the patient.	
h. Falls in the elderly resulting in hip or wrist fractures are a common call.	

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   i. Ground level falls resulting in minor injury are another common call you will receive.

2. Common Causes:
   a. Medical causes such as epilepsy, CVA (stroke), fainting, etc.
   b. Industrial and construction accidents.
   c. Environmental factors like ice, snow, alcohol, drugs, etc.
3. Common Symptoms Described by Caller (presentation)
   a. Visible external trauma.
   b. Numbness, tingling or loss of movement in cases of associated spinal cord injury.
   c. Anxiety due to the mechanism of injury.
4. Instructions Commonly Provided:
   a. Monitor and maintain patient's airway, especially if the patient has a decreased level of consciousness.
   b. Do not move the patient, do not splint the injuries or otherwise disturb the patient unless there is an airway compromise.
   c. Treat for shock:
      1) Keep patient warm (maintain body temperature).
      2) DO NOT GIVE PATIENT FOOD OR DRINK.

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<TG PAGE 3-42>

TRAINEE TEXT	INSTRUCTOR NOTES
d. Use direct pressure to control external bleeding.	
e. Call back if the patient's condition changes before help arrives.	**<TG PAGE 3-43>**
f. Lock all pets away because they may interfere with instructions given or attack responding personnel.	
5. Special Pediatric Considerations:	
a. Some special categories of falls exist for children, including walker falls, playground falls, falls from buildings and inflicted injury attributed to an accidental fall.	
b. Toddlers and infants can sustain skull fractures and potential brain injury in falls under four feet *if the contact surface is not shock-absorbing* (i.e., falls from shopping cart to a concrete or tile surface, from beds or changing tables to uncarpeted floors, or down uncarpeted stairs in a walker).	
c. The severity of playground injuries relates to the height of play structures and the shock absorbing qualities of the contact surface.	
d. Accidental falls from windows happen commonly during the summer months and can be prevented by window guards, but children also fall from windows because they are pushed or because they are deliberately jumping to escape perceived threat or to attempt suicide.	
e. Injuries attributed to a fall from a mechanism that is not developmentally likely or possible may be due instead to child abuse/inflicted injury. (An example	

TRAINEE TEXT	INSTRUCTOR NOTES
might be a one month old said to have fallen from the changing table, at an age when most infants cannot roll from back to stomach.)	
6 - Heat/Cold Exposure (Traumatic Incident Type)	**<TG PAGE 3-44>**
1. Background:	**Review** the Heat/Cold Exposure complaint type.
a. Heat related problems can be classified as either heat exhaustion or heat stroke, the latter representing a more serious situation.	
b. Heat exhaustion is caused by a metabolic imbalance resulting in flu like symptoms such as pallor, nausea and vomiting. In this case the patient should be moved to a cooler environment and be given fluids to drink (UNLESS THE PATIENT IS NAUSEOUS OR VOMITING). Heat exhaustion usually is secondary to outside exertion in hot and humid weather.	
c. In cases of heat stroke the body loses it's ability to thermoregulate itself. The body core temperature rises and the patient's level of consciousness decreases. Frequently, the patient will feel hot and dry to the touch, though they may also be profusely sweating (if they were engaged in some physical exertion). In some cases, the skin will appear reddened. The patient should be moved to a cooler environment and cooled with water. The patient should not be given fluids or anything to drink.	
d. Cold related problems are usually frost bite or hypothermia, the latter representing the more serious situation.	

TRAINEE TEXT	INSTRUCTOR NOTES
e. Frost bite represents a condition that results in the freezing of the peripheral and exposed areas, usually the fingers and toes. The tissue should not be rubbed to rewarm the tissue. The extremities should be kept warm and dry until help arrives. Prevention of further exposure and injury is the focus in these cases.	**<TG PAGE 3-45>**
f. Hypothermia results when the body loses it's ability to thermoregulate itself and generate heat internally. The body core temperature drops and the patients level of consciousness decreases. The patient must be removed from the cold environment and warmed. No fluids should be given to the patient in this case.	
g. Long exposure and hypothermia may cause cardiac arrest. "No patient should be assumed dead until he is warm and dead." Provision of telephone CPR, in cases of hypothermia, should be determined by local medical control.	**Explain** to trainees that telephone CPR, in cases of hypothermia, is determined by local medical control.
h. Hypothermic patients are prone to ventricular fibrillation with rough handling. Sometimes just moving the patient to the ambulance stretcher will put them into fibrillation. Caution is advised in moving these patients.	
2. Common Causes:	
a. As noted previously.	
3. Common Symptoms Described by Caller (presentation)	
a. As noted previously.	

TRAINEE TEXT

4. Instructions Commonly Provided in addition to those noted previously:
    a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
    b. Treat for shock:
        1) Control bleeding.
        2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
        3) Keep patient warm (or cool, depending on the exposure being treated).
    c. Do not give the patient anything to eat or drink except in cases of heat exhaustion (and if the patient is not vomiting or nauseous) when the patient is benefitted by fluids. Never give anything to drink to the patient with a decreased level of consciousness.
    d. Gather or list the patient's medications for the doctor.
    e. Call back if the patient's condition changes before help arrives.
    f. Lock all pets away because they may interfere with instructions given or attack responding personnel.

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TRAINEE TEXT	INSTRUCTOR NOTES
5. Special Pediatric Considerations:	
a. Pediatric complaints of this type are rare and often are presented to the EMD as frostbite or chilblains (itching inflammations of the skin due to exposure to moist cold) on exposed tissues such as the fingers, feet and ears. Treatment from the EMD should be limited to getting the patient out of the cold environment and attempting to rewarm the extremity by means other than rubbing the affected tissues.	**<TG PAGE 3-47>**
b. Heat related complaints usually are presented to the EMD as a "sick child" with flu like symptoms, dehydration from playing in the hot outdoors and slight heat exhaustion. Treatment includes removing the patient from the hot environment and providing fluids (if not nauseaous or vomiting).	
c. Children are more slow to acclimate to hot or humid weather than adults and become dehydrated more rapidly. Children particularly at risk for environmental or exertion caused heat stroke are obese, febrile, have underlying pre-existing conditions like cystic fibrosis or diabetes, or recurrent vomiting and diarrhea. Infants and toddlers are particularly vulnerable to environmental heat stroke when overdressed, left in parked cars, or confined in a hot tub, sauna or any enclosed space.	

TRAINEE TEXT	INSTRUCTOR NOTES
d. Children are seldom aware of the early signs of cold such as numbness, and may not be as compliant as adults in wearing appropriate covering. Pre-pubertal children with cold injuries can be at risk for growth plate injury and subsequent poor bone growth, especially of fingers and toes. When removing the child from the cold environment, make sure to advise changing wet clothes for dry coverings.	**<TG PAGE 3-48>**
7 - Bleeding (Traumatic Incident Type)	**Review** the Bleeding complaint type.
1. Background:	
a. Bleeding can be categorized as having two sites of origin, internal or external.	
b. Vomiting blood, bleeding from the rectum or untimely vaginal bleeding should always be considered more serious than external bleeding.	
c. External bleeding can be categorized as either being venous (dark red oozing blood) or arterial (bright red spurting blood). In either case the EMD must remember that ninety-five percent of all external bleeding can be controlled with direct pressure.	
d. The caller may be frightened by what appears to be a volume of blood. Reassure the caller and calm them.	
e. The EMD should not advise using pressure points or tourniquets. If the bystanders have already applied a tourniquet, leave it on the patient and allow the on-scene personnel to deal with it.	391

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f. Because of the vascular nature of the face and scalp, lacerations to these areas may appear to be serious bleeds. Remember to focus on controlling the bleeding rather than estimating volume of blood loss.	
g. Patients on blood-thinning drugs or those with hemophilia should be considered higher priority, life-threatening events and receive a higher level response.	**<TG PAGE 3-49>**
h. The primary focus of the EMD should be on control of external bleeding, identifying symptoms indicating the onset of shock and airway maintenance of the unconscious patient.	
2. Common Causes:	
a. Self explanatory for external bleeding.	
b. Internal bleeding can be caused by trauma, chronic or acute gastrointestinal ulcerative disease, gynecological/obstetric maladies and ruptured abdominal aortic aneurysms.	
3. Common Symptoms Described by Caller (presentation)	
a. Blood squirting out or pulsating out are common descriptions of external arterial bleeding.	
b. Internal bleeding can be manifested as coffee ground-like emesis (vomit), blood in the emesis, dark tarry stools (indicating upper GI bleeds) or blood in the stools (indicating a lower GI bleed).	

TRAINEE TEXT	INSTRUCTOR NOTES

c. Anxiety, lowered levels of consciousness, agitation, chills, along with other classic symptoms of shock, are often reported in association with serious bleeds.

4. Instructions Commonly Provided:

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   a. Monitor and maintain patient's airway if level of consciousness is decreased.

   b. Use direct pressure for all external lacerations. If the bleeding does not stop, the caller should apply more pressure to the bleeding site.

   c. Treat for shock:

      1) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.

      2) Keep patient warm.

      3) DO NOT GIVE PATIENT FOOD OR DRINK.

   d. For nose bleeds instruct the caller to pinch the nose between the thumb and finger and apply pressure in this way. Have the patient sit forward and attempt to spit the blood out (swallowing it will make the patient nauseous).

   e. Call back if the patient's condition changes before help arrives.

   f. Lock all pets away because they may interfere with instructions given or attack responding personnel.

TRAINEE TEXT	INSTRUCTOR NOTES
5. Special Pediatric Considerations:	
a. Lacerations or hemorrhages in the head and facial areas in children may be serious bleeds because children have a smaller total circulating blood volume than adults and because these areas are very well supplied with blood and make up a larger portion of the body than in adults.	**Point** out that head wounds in children are more serious. **<TG PAGE 3-51>**
8 - Industrial Accidents (Traumatic Incident Type)	**Review** the Industrial Accidents complaint type.
1. Background:	
a. The purpose of this protocol is to identify what the situation is, where the patient is, if the patient is trapped in machinery and direct the caller to have someone meet and guide the responding personnel to the patient.	
b. These cases should be handled as case specific, and if the chief complaint can be identified the EMD may go to a more appropriate protocol for the provision of pre-arrival instructions.	
c. These calls are most often third party calls.	
d. Enclosed spaces present grave danger where chemicals or gases may be present. These are most common in industrial or farm settings. The offending agent may not be obvious. Rescue should only be attempted by trained rescue personnel.	**Point** out the dangers of enclosed spaces.

TRAINEE TEXT	INSTRUCTOR NOTES
2. Common Causes:	
a. Industrial traumatic incidents and entrapments in machinery	
b. Common medical incident types such as abdominal pain, chest pain, diabetic problems, etc.	
c. Reaction or exposure to chemicals or gases in the environment.	**<TG PAGE 3-52>**
3. Common Symptoms Described by Caller (presentation)	
a. Case specific. Often all that is known is that an ambulance is needed at a particular location.	
4. Instructions Commonly Provided:	
a. Advise callers not to go into enclosed spaces to retrieve or treat the victim due to the possible presence of noxious or dangerous fumes.	
b. The call often comes in from a security office or factory medical clinic. If the call comes from the security office of some location remote from the patient, it is very important to have them direct someone to meet the responders and guide them to the patient.	
c. Case specific pre-arrival instructions should be given if the chief complaint is identified.	
d. If the patient is trapped in machinery the machinery should be shut off.	
e. Do not move the patient or splint the injuries.	

TRAINEE TEXT	INSTRUCTOR NOTES
f. Control of external bleeding with direct pressure and treat for shock if symptoms are present.	
g. Obtain and relay pertinent information regarding previous medical history and cause of incident if possible.	
h. Treat for shock: 1) Control bleeding. 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS. 3) Keep patient warm. 4) DO NOT GIVE PATIENT FOOD OR DRINK.	**<TG PAGE 3-53>**
i. Lock all pets away because they may interfere with instructions given or attack responding personnel.	
5. Special Pediatric Considerations: NONE	
9 - Stabbing/Gunshot Victim (Traumatic Incident Type)	**Review** the Stabbing/Gunshot complaint type.
1. Background: a. This protocol deals with penetrating trauma of any kind. b. Penetrating trauma to the extremities is not as serious as penetrating trauma to the torso (or central core). Penetrating traumas below the knees and elbows are not as serious as those above these areas of the extremities.	

TRAINEE TEXT	INSTRUCTOR NOTES
c. The safety of the scene is critical to determine and relay to the responding personnel.	
d. The EMD should attempt to determine if there is a weapon at the scene or if the assailant is nearby.	**<TG PAGE 3-54>**
e. The EMD should also determine when the incident occurred.	
2. Common Causes:	
a. Self-explanatory	
3. Common Symptoms Described by Caller (presentation)	
a. Callers reporting these incidents often have an emotional response to the situation. Proper calming techniques should be used.	
b. Visible external bleeding.	
c. Multiple victims.	
d. Unconscious patient.	
4. Instructions Commonly Provided:	
a. Advise callers to remain safe. Do not approach scene if the assailant is presumed to be present.	
b. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.	
c. Use direct pressure to control external bleeding.	
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d. Treat for shock:
   1) Control bleeding.
   2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
   3) Keep patient warm.
   4) DO NOT GIVE PATIENT FOOD OR DRINK.

e. Do not pull out penetrating objects.

f. Do not disturb the scene or remove weapons.

g. Gather or list the patient's medication for the doctor.

h. Call back if the patient's condition changes before help arrives.

5. Special Pediatric Considerations:

   a. A child with a penetrating injury is highly likely to require surgery. Make sure that children in your system have access to a facility with staff (emergency department, surgeon, anesthesiologist, nursing, intensive care unit, laboratory, etc.) familiar with critically ill or injured children, as well as the means to get there in a timely fashion.

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TRAINEE TEXT	INSTRUCTOR NOTES
10 - Traumatic Injuries (Traumatic Incident Type)	**Review** the Traumatic Injuries complaint type.
1. Background:	
a. This protocol is used for specific, identifiable injuries.	
b. The focus of this protocol is to keep the patient still and to provide information so as to not cause any further injury to the patient.	**<TG PAGE 3-56>**
2. Common Causes:	
a. Fractures, dislocations, minor contusions and abrasions, etc.	
b. Falls resulting in some specific trauma other than to the back.	
3. Common Symptoms Described by Caller (presentation)	
a. Fractures, pain and swelling, immobility.	
b. Back pain, numbness, tingling or immobility of the extremities. In this case a spinal injury should be assumed and spinal precautions taken.	
c. External bleeding.	
4. Instructions Commonly Provided:	
a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.	

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TRAINEE TEXT	INSTRUCTOR NOTES
b. Treat for shock:	
1) Control bleeding.	
2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.	
3) Keep patient warm.	
4) DO NOT GIVE PATIENT FOOD OR DRINK.	**<TG PAGE 3-57>**
c. Do not move the patient or splint any injuries.	
d. Call back if the patient's condition changes before help arrives.	
e. Lock all pets away because they may interfere with instructions given or attack responding personnel.	
5. Special Pediatric Considerations:	
a. The alert injured child should be kept with a familiar adult if possible.	
b. Injuries which look like sprains in children may involve the noncalcified portion of the bone called the "***growth plate***." If the growth plate of a particular bone is injured, there may be a difference in final bone length or growth compared with the other side. Children who complain of hip, groin, or knee pain after a trivial injury may have a slippage of the bone through the growth plate of the femur (thigh bone). Further weight bearing may increase the slippage. Such children should be kept off their feet until evaluated even though they may be able to bear weight.	

TRAINEE TEXT	INSTRUCTOR NOTES
11 - Vehicle Related Injuries (Traumatic Incident Type)	**Review** the Vehicle Related Injuries complaint type.
1. Background:	
a. This protocol is used in cases of injury caused by vehicles like automobile collisions, auto-pedestrian incidents, auto-motorcycle and bicycle collisions.	**<TG PAGE 3-58>**
b. Due to the third party nature of these calls information regarding how many patients, if there are any visible injuries, and the mechanisms of the accident are helpful to elicit from the caller and relay to the responding personnel.	
c. Additional information of use includes if any one has been thrown from the vehicle or if there is chemical spill involved. If a chemical spill has occurred this information should be relayed, along with the type of chemical involved, to HAZMAT personnel.	
d. Often motor vehicle collisions resulting in serious injury or death are treated as crime scenes. Check with your local regulations about what to do about these situations.	
2. Common Causes:	
a. Self explanatory.	

TRAINEE TEXT	INSTRUCTOR NOTES

3. Common Symptoms Described by Caller (presentation)
    a. Multiple calls for the same collision. Callers may offer different accounts of the accident. Dispatch of appropriate resources should follow established in-house operating procedures.
    b. Multiple patients, patients thrown, roll-overs and numerous other descriptions of the like.
    c. Auto-pedestrian, auto-motorcycle and auto-bicycle collisions should always be considered high level emergencies.

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4. Instructions Commonly Provided:
    a. Treat for shock:
        1) Control bleeding.
        2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
        3) Keep patient warm.
        4) DO NOT GIVE PATIENT FOOD OR DRINK.
    b. Do not move the patient(s) unless they are in danger.
    c. Do not splint any injuries.
    d. Ensure that the patient(s) have an open airway and monitor the patient's level of consciousness.
    e. Call back if the patient's condition changes before help arrives.

TRAINEE TEXT	INSTRUCTOR NOTES
f. Treat collision as potential crime scene until law enforcement arrives. Check with local regulations on how to deal with collision crime scenes.	
g. Lock all pets away because they may interfere with instructions given or attack responding personnel.	
5. Special Pediatric Considerations:	**<TG PAGE 3-60>**
Vehicle-Child injuries will tend to be worse than Vehicle-Adult injuries for the following reasons:	
a. children tend to turn and face the oncoming car (resulting in frontal injuries) while adults tend to turn away (resulting in less life-threatening back injuries) and	
b. children's height tends to put their vital organs at the same level as the bumper of the approaching vehicle, making the resulting injuries that much worse.	
c. If multiple family members are involved in a vehicle crash, it is helpful to be able to transport the child with at least one familiar adult family member if possible.	
d. Policies for extrication of children in car seats should reflect the most recent NHTSA guidelines.	

TRAINEE TEXT	INSTRUCTOR NOTES
Individual Chief Complaint Protocols. Following is a detailed review of the fourteen Individual Chief Complaint protocols. Your instructor will provide additional information about these, and then you will be given the opportunity to practice using your local EMDPRS for the protocol that corresponds to the chief complaint.	**<TG PAGE 3-61>** **Review** each of the following Individual Chief Complaint protocols. We suggest you review each individual chief complaint type by going over the: 1. background; 2. common causes; 3. common symptoms reported; 4. instructions usually given and 5. any special pediatric considerations the EMD should know. Once you've reviewed these points (for each complaint type), review EMDPRS protocols for the members of your class. If trainees represent many different agencies, you might consider using multiple instructors and breaking the class into groups where EMDPRSs can be reviewed individually.

TRAINEE TEXT	INSTRUCTOR NOTES
1 - Abdominal Pain (Individual Chief Complaint)	**Review** the Abdominal Pain complaint type.
1. Background:	
a. Most abdominal pain is non-urgent in nature. There are some critical situations that can be identified with proper questioning from the EMD using the EMDPRS.	
b. Sometimes, patients experiencing cardiac events such as myocardial infarction (M.I.) will describe the pain as in their upper abdomen.	
c. Women of childbearing age range may be having abdominal pain due to an ectopic pregnancy. This is often accompanied by signs and symptoms of shock from internal bleeding if the fallopian tube has ruptured.	
d. Abdominal pain can be acute or chronic. In either case the key to a proper response is determining the age, history and symptoms the patient is presently exhibiting, particularly identifying the existence of chest pain or fainting (in females of child bearing age range).	
e. The severity and duration of the pain often do not relate to the severity of the problem.	
f. Patients over the age of 50, complaining of lower back pain with no history of injury or chronic back problems or if they are exhibiting signs of shock should be considered as experiencing abdominal aortic aneurysms and be dealt with as an emergency.	**<TG PAGE 3-62>**

TRAINEE TEXT	INSTRUCTOR NOTES

2. Common Causes:
   a. Most critical causes of abdominal pain include:
      1) myocardial infarction (symptoms include high abdominal pain (like indigestion);
      2) abdominal aortic aneurism (symptoms include abdominal pain associated with back pain, sweating, fainting, symptoms of shock, dizziness) and
      3) ectopic pregnancy (lower abdominal pain; signs of shock and may or may not have missed a period).
   b. Moderately serious causes of abdominal pain include simple appendicitis, bowel obstruction (usually found in the elderly), perforated gastric ulcers, kidney stones and chronic illnesses involving the abdominal organs.
   c. Least critical causes of abdominal pain include gastritis, gastroenteritis, pelvic inflammatory disease, gastric ulcers, flu type maladies and gas.
3. Common Symptoms Described by Caller (presentation)
   a. Sharp stabbing pains, localized or covering the abdomen generally.
   b. Abdominal distention or bloating.
   c. Nausea, vomiting, diarrhea.

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TRAINEE TEXT	INSTRUCTOR NOTES
d. Pallor, sweating, fainting, light-headedness.	
4. Instructions Commonly Provided:	
a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting.	
b. Allow patient to assume a comfortable position.	
c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.	
d. Treat for shock:	
1) Keep airway clear.	
2) DO NOT GIVE FOOD OR DRINK.	
3) Let patient assume a position of comfort.	
4) Calm and reassure patient.	
5) Keep the patient warm (maintain body temperature).	
e. Gather or list the patient's medication for the doctor.	
f. Call back if the patient's condition changes before help arrives.	**<TG PAGE 3-64>**
g. Lock all pets away because they may interfere with instructions given or attack responding personnel.	

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TRAINEE TEXT	INSTRUCTOR NOTES

5. Special Pediatric Considerations:

   a. Abdominal pain in the pediatric patient is rarely a symptom of a critical event. It is worth considering three special situations that require rapid response.

      1) Parents will sometimes attribute persistent irritability or crying in their infant to abdominal pain and may contact EMS out of alarm or because they can no longer tolerate the crying. Irritable or colicky infants may be at increased risk of child abuse.

      2) Young boys with torsion (twisting) of the testicle may report only abdominal pain (either because the pain is referred to the abdomen or out of modesty). Failure to reverse the testicular torsion rapidly and restore the blood supply may result in the loss of reproductive function in that testicle.

      3) Because infants and children cannot always describe or communicate their symptoms, moderately serious causes of abdominal pain may not receive attention as quickly as they might in an adult, and may therefore be complicated by shock, peritonitis, and bowel necrosis (tissue death).

   b. Moderately serious causes of abdominal pain in children include appendicitis (often ruptured before diagnosed in young children), kidney stones or bowel obstruction like intussusception (telescoping of the bowel on itself) or volvulus (twisting of the bowel on itself). Vomiting that is green or yellow may contain bile and should be considered a

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TRAINEE TEXT	INSTRUCTOR NOTES
sign of intestinal obstruction. If there has been considerable vomiting, the abdominal pain may be complicated by dehydration.	
c. Children may also complain of abdominal pain with strep throat, pneumonia, and simple gastroenteritis, constipation or gas.	
2 - Allergies/Stings (Individual Chief Complaint)	**Review** the Allergies/Stings complaint type.
1. Background:	
a. An allergic reaction represents the body's adverse reaction to a foreign substance (antigen). In most cases allergic reactions are very minor.	
b. Some individuals have severe allergies to one or more substances and can have a very severe reaction (anaphylactic shock).	
c. The most important symptoms to identify in all reported cases of an allergic reaction are the existence of difficulty breathing or swallowing.	
d. Anaphylactic shock is the most critical allergic reaction.	**<TG PAGE 3-66>**
e. Anaphylactic shock is of sudden onset. Hives, rashes or itching that have been present for over an hour without difficulty breathing or swallowing are unlikely to progress into anaphylaxis.	
2. Common Causes:	
a. It is important to remember that a patient could be allergic to anything, therefore the EMD should evaluate	

TRAINEE TEXT	INSTRUCTOR NOTES
critical symptoms and not try to determine the cause of the reaction.	
b. Individuals are most commonly allergic to bee stings and other insect bites, seafood (particularly shellfish), nuts, berries and medication such as injected penicillin.	
3. Common Symptoms Described by Caller (presentation)	
a. In more severe cases the caller may report sudden collapse, difficulty breathing and/or swallowing, excessive salivation, unconsciousness and respiratory arrest.	
b. Anaphylactic shock may have some or all of the symptoms mentioned in 3.a. These symptoms will occur within one hour of the exposure in most cases.	
c. Minor symptoms may include a rash, swelling, hives, itching, abdominal pain and nausea. If these symptoms have been present for over one hour they are very unlikely to progress into anaphylaxis.	
d. *If the caller reports that the patient has a history of allergies and has had these reactions before,* ***believe them!*** They may indicate that the patient has been provided a self injectable medication, usually adrenalin or epinephrine. The EMD should tell the caller to have the patient "do what the doctor told you to do".	**<TG PAGE 3-67>**

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4. Instructions Commonly Provided:

   a. Monitor and maintain patient's airway, especially if patient is showing redness and/or swelling around the eyes, nose and mouth or having difficulty breathing or swallowing or has a decreasing level of consciousness.

   b. If the patient's condition seems to be worsening, keep the caller on the phone and be prepared to initiate telephone CPR.

   c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

   d. Treat for shock:

      1) Keep airway clear.

      2) DO NOT GIVE FOOD OR DRINK.

      3) Let patient assume a position of comfort.

      4) Calm and reassure patient.

      5) Keep the patient warm (maintain body temperature).

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   e. Unconscious patients should be placed on their side and their airways maintained. The EMD should constantly monitor the patient's airway and breathing status if the patient becomes unconscious.

   f. The EMD should tell the caller to have the patient "do what the doctor told you to do".

   g. Gather or list the patient's medications for the doctor.

TRAINEE TEXT	INSTRUCTOR NOTES
h. Call back if the patient's condition changes before help arrives.	
i. Lock all pets away because they may interfere with instructions given or attack responding personnel.	
5. Special Pediatric Considerations:	
a. Respiratory symptoms from allergic reactions can progress very rapidly in children to partial or complete airway obstruction and respiratory arrest, because their smaller airways can become obstructed with smaller degrees of swelling. Unsuspected allergic reaction to a sting or food item can be the cause of sudden unconsciousness in the child.	
3 - Back Pain (Individual Chief Complaint)	**Review** the Back Pain chief complaint.
1. Background:	
a. The incidence of non-traumatic back pain is very common and in most cases represents minor problems. There are some critical situations that can be identified with proper questioning from the EMD using the EMDPRS.	**<TG PAGE 3-69>**
b. Often a patient experiencing a cardiac event such as myocardial infarction (M.I.) will describe the pain as radiating through to their back.	

TRAINEE TEXT	INSTRUCTOR NOTES

c. Patients over the age of 50, complaining of lower back pain with no history of injury or chronic back problems or if they are exhibiting signs of shock should be considered to be experiencing abdominal aortic aneurysms and be treated as an emergency.

d. Back pain may be described as either acute or chronic. In either case the key to a proper response is determining the age, history and symptoms the patient is presently exhibiting, particularly identifying the existence of chest pain (in patients over 35) or fainting (in patients over 50).

e. The severity of the pain and the duration of the pain often does not relate to the severity of the problem.

2. Common Causes:

    a. Most critical causes of back pain include falls, abdominal aortic aneurysms, thoracic dissections, neurologic problems and M.I.

    b. Moderately serious causes of back pain include kidney stones, rib and spinal fractures (if traumatically induced).

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    c. Least critical causes of back pain include chronic low back pain, vertebral disc disease, kidney infections and sprained backs.

3. Common Symptoms Described by Caller (presentation)

    a. Sharp stabbing pains, localized or covering the abdomen generally.

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b. Abdominal distention or bloating.

c. Nausea, vomiting, diarrhea.

d. Pallor, sweating, fainting light-headedness.

e. Numbness or tingling in the extremities.

4. Instructions Commonly Provided:

a. .Monitor and maintain patient's airway, especially if patient is nauseous or vomiting.

b. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

c. Treat for shock:

  1) Keep airway clear.

  2) DO NOT GIVE FOOD OR DRINK.

  3) Let patient assume position of comfort (IN CASES OF TRAUMATIC BACK PAIN, THE PATIENT SHOULD NOT BE MOVED);

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  4) Calm and reassure patient and

  5) Keep the patient warm (maintain body temperature).

d. Gather or list the patient's medications for the doctor.

e. Call back if the patient's condition changes before help arrives.

f. Lock all pets away because they may interfere with instructions given or attack responding personnel.

TRAINEE TEXT	INSTRUCTOR NOTES
5. Special Pediatric Considerations: - NONE	
4 - Breathing Problems (Individual Chief Complaint)	
1. Background:	**Review** the Breathing Problems complaint type.
a. Breathing problems are usually more severe in the very young and the very old. b. Often a patient experiencing a cardiac event such as myocardial infarction (M.I.) will complain of difficulty breathing. c. Breathing problems should always be considered a high level medical emergency. d. The previous medical history should be relayed to the responding units.	
NOTE: People who call you reporting breathing problems represent one of the most difficult calls you will have to deal with. What may be one person's distress could be another's chronic breathing problem (that they have to deal with daily). What's most important is that you try to determine what has changed about the person's breathing that prompted to caller to call for help.	**<TG PAGE 3-72>** **Tell** trainees that breathing problem calls represent the most difficult calls they will receive.

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2. Common Causes:
    a. Primary breathing problems having to do with the lungs (lower respiratory system) include asthma, pneumonia, drug overdose, emphysema, pulmonary embolus, congestive heart failure and acute pulmonary edema.
    b. Secondary breathing problems having to do with the upper airway include croup, choking, epiglottitis and partial airway obstructions.
    c. Tertiary breathing problems caused by an unrelated illness or incident include hyperventilation syndrome, stroke (CVA), diabetic ketoacidosis, seizures, cardiac arrest, and in some cases severe facial trauma.
3. Common Symptoms Described by Caller (presentation)
    a. Difficulty breathing, wheezing, shortness of breath, noisy breathing, "fighting for air," gasping for air, etc.
    b. Anxiety, change in skin color, impending feeling of "impending doom."
    c. Excessive coughing.
4. Instructions Commonly Provided:
    a. Monitor and maintain patient's airway, especially if patient is nauseous or vomiting.

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TRAINEE TEXT	INSTRUCTOR NOTES
b. Calm and reassure the patient. Tell the patient to relax and slow their breathing, blow the air out and encourage the patient to breath with you.	
c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.	
d. Treat for shock: 1) Keep airway clear. 2) DO NOT GIVE FOOD OR DRINK. 3) Let patient assume position of comfort (usually sitting-up). 4) Calm and reassure patient. 5) Keep the patient warm (maintain body temperature).	
e. Gather or list the patient's medication for the doctor.	
f. Call back if the patient's condition changes before help arrives.	
g. Lock all pets away because tey may interfere with instructions given or attack responding personnel.	**<TG PAGE 3-74>**

TRAINEE TEXT	INSTRUCTOR NOTES

5. Special Pediatric Considerations:

   a. *Breathing problems are the most common pediatric medical problem encountered by the EMD* and can be critical. Air passages are smaller than in the adult, and therefore problems will be more acute. Airway obstruction happens more commonly in infants and children than in adults. Infants may not learn to breath through their mouths until as late as nine months of age, therefore, simple nasal congestion of a cold is capable of causing significant respiratory distress in the infant. In addition to the signs and symptoms listed above, consider the presence of head bobbing, grunting (a sound made in expiration with each breath) flaring of the nostrils and retracting of the skin with each breath at the clavicles, ribs and diaphragm as signs of advancing respiratory distress.

   b. Although the incidence of epiglottitis has marked declined since the use of a vaccine to prevent the usual bacteria responsible, it remains a true respiratory emergency. The hallmark presenting sign is usually marked throat pain to the point of being unable to swallow (drooling), fever and rapidly progressing respiratory distress in a febrile child who assumes a "tripod" sitting position with his/her neck flexed and head extended (the "sniffing" position). The child with suspected epiglottitis, and all children with suspected upper airway obstruction, should be allowed to assume the position of comfort, kept calm, not separated from his or her parent and brought to medical attention as soon as possible.

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TRAINEE TEXT	INSTRUCTOR NOTES
5 - Chest Pain (Individual Chief Complaint)	**Review** the Chest Pain complaint type.

1. Background:
    a. Chest pain often is caused by a blockage of one or more of the coronary arteries. This blocks the oxygen delivery to a portion of the heart muscle and causes chest pain.
    b. Often a patient experiencing a cardiac event such as myocardial infarction (M.I.) will describe the pain as in their upper abdomen.
    c. The average age of the onset of symptomatic cardiac disease is 35 years old for males and 40 years for females. Any male patient 35 or older or female 40 or older complaining of abdominal pain should be considered a possible cardiac event.
    d. Any patient over the age of 35 complaining of chest pain should be considered a cardiac event.
    e. Patients with prior histories of cardiac problems may represent a higher critical problem.
2. Common Causes:
    a. Most critical causes of chest pain include heart attack (myocardial infarction or M.I.) and a dissecting thoracic aortic dissection (aneurism in the chest).

TRAINEE TEXT	INSTRUCTOR NOTES
b. Potentially critical problems causing chest pain include pulmonary embolisms (blood clot in the lungs) and pericarditis (infection of the tissues surrounding the heart).	**<TG PAGE 3-76>**
c. Least critical causes of chest pain include pleurisy, pneumonia, esophagitis, hiatal hernias, viral illnesses, rib injuries, muscle strains and "shingles."	
3. Common Symptoms Described by Caller (presentation)	
a. Chest pain that is related to a problem with the respiratory system or lungs is usually described as a sharp stabbing pain that increases or decreases with respirations.	
b. Chest pain associated with a heart attack or M.I. is often described as a dull crushing pain or a pressure sensation that may radiate to the neck, jaw and/or left arm (similar to angina). The patient often experiences a change in skin color (ashen gray or pale) and they often experience severe sweating (diaphoresis). The patient may be nauseous, vomiting and have difficulty breathing. They often are very anxious and have a "feeling of impending doom."	**Emphasize** that the patient may deny pain or not call the sensation pain.
4. Instructions Commonly Provided:	**<TG PAGE 3-77>**
a. Monitor and maintain patient's airway, especially if patient is nauseous or vomiting.	

TRAINEE TEXT	INSTRUCTOR NOTES
b. Allow patient to assume a comfortable position, usually sitting up to aid in respirations.	
c. The patient may report that they have been given medication to take when they experience chest pain. If they ask the EMD what they should do, the EMD should advise the caller to have the patient do what their doctor told them to do. If the patient has taken any medication, this information should be relayed to the responding units.	
d. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.	
e. Treat for shock: 1) Keep airway clear. 2) DO NOT GIVE FOOD OR DRINK. 3) Let patient assume position of comfort. 4) Calm and reassure patient. 5) Keep the patient warm (maintain body temperature).	
f. Have first-party callers stay on the phone, or if the patient has an altered level of consciousness, or if callers state that they feel as if they "are going to die."	
g. Gather or list the patient's medications for the doctor.	**<TG PAGE 3-78>**
h. Call back if the patient's condition changes before help arrives.	

TRAINEE TEXT	INSTRUCTOR NOTES
i. Lock all pets away because tey may interfere with instructions given or attack responding personnel.	
5. Special Pediatric Considerations:	
a. Chest pain is a common symptom in young adolescents, but unusual in younger children and when present is extremely unlikely to be due to myocardial infarction. Spontaneous pneumothorax, air leak from an acute asthmatic attack, and pulmonary embolus do occur in the pediatric population.	
b. Because it is not commonly recognized, pulmonary embolus has a much higher case fatality rate in children than in adults. The child with chest pain, fast heart and breathing rate and any of the following can be considered at risk for pulmonary embolus:	
1) obesity	
2) birth control pills	
3) dehydration	
4) nephrotic syndrome	
5) family history of clotting problems	
6) recent long bone fracture and	
7) prolonged bedrest or inactivity.	**<TG PAGE 3-79>**

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TRAINEE TEXT	INSTRUCTOR NOTES
6 - Convulsion/Seizure (Individual Chief Complaint)	**Review** the Convulsion/Seizure complaint type.
1. Background:	
a. A convulsion or seizure is believed to be caused by a misfiring of nerve cells in the brain either as a result of injury, lack of oxygen or disease.	
b. Patients going into cardiac arrest occasionally will have a brief, anoxic seizure due to the brain being robbed of oxygen. It is often an initial sign of cardiac arrest. Seizure patients over 35 whose breathing cannot be verified should be considered cardiac arrests until breathing can be confirmed.	
c. There are many types of seizures including granD mal, petit mal, psychomotor, focal motor and jacksonian. All present themselves in a different fashion. The most common by far is the gran mal.	
d. Ninety-five percent of all seizure patients with an unknown history have been diagnosed with epilepsy.	
e. Seizures associated with fever (febrile seizures) in children under 6 are common. They are usually short in duration (less than 15 minutes), self-limited, and rarely cause respiratory or cardiac compromise. It is unusual for febrile seizures to require medication in the field and they do not indicate that the child has epilepsy.	
f. CPR should not be performed on a seizure patient unless the pulse is not present.	**<TG PAGE 3-80>**

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g. Once the seizure has stopped, maintaining an open and clear airway is the most important thing the EMD can do for the seizure patient.

h. Most seizures last approximately 45-60 seconds. Anoxic seizures resulting from cardiac arrest are usually much shorter. After the seizure stops, the patient is normally unconscious and in what is referred to as a "post-ictal" state. This condition usually last less that 15 minutes and may be longer for some patients. Once the seizure has ended, the patient experiences excessive salivation and may have a great deal of oral secretions. This is the time when airway maintenance is crucial.

i. Patients reported to be having continuous or multiple seizures represent a much higher medical emergency.

j. Some epileptic patients can tell when they are going to have a seizure and may have someone call for help before the seizure starts. This is called an aura.

2. Common Causes:

   a. Epilepsy, trauma to the head, brain or intra-cranial tumors, meningitis, cardiac arrest, anoxia (lack of oxygen), fever, and many other causes. Anything that disrupts the normal functioning of the brain has the potential to cause a seizure.

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TRAINEE TEXT	INSTRUCTOR NOTES

3. Common Symptoms Described by Caller: (presentation)

    a. Sudden stiffening and jerking movements over the entire body. The caller may describe the patient as arching their back and perhaps crying out just before the seizure.

    b. Bluing or discoloration of the skin during seizure.

    c. Snoring or gurgling after the seizure is over. This indicates a possible compromise in the airway.

4. Instructions Commonly Provided:

    a. Monitor and maintain patient's airway after the seizure. Gently roll the patient on their side and clear out the mouth to clear the airway.

    b. Do not attempt to hold the patient down during the seizure.

    c. Do not perform CPR while the patient is jerking.

    d. Do not attempt to place anything in the mouth while patient is seizing to prevent them from biting or "swallowing" the tongue.

    e. Do not let the patient get up or wander around after the seizure, as they may not be fully conscious.

    f. Move dangerous objects away from the patient during the seizure to prevent injury.

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TRAINEE TEXT	INSTRUCTOR NOTES
g. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.	
h. Treat for shock:	
1) Keep airway clear.	
2) DO NOT GIVE FOOD OR DRINK.	
3) Let patient assume position of comfort.	
4) Calm and reassure patient.	
5) Keep the patient warm (maintain body temperature).	
i. Gather or list the patient's medications for the doctor.	
j. Call back if the patient's condition changes before help arrives.	
k. Lock all pets away because they may interfere with instructions given or attack responding personnel.	
5. Special Pediatric Considerations:	
a. Seizures in children are common and a common reason for calling EMS. Although many childhood seizures will be found to be simple febrile seizures, epilepsy is common in childhood.	
b. Status epilepticus is a series of consecutive seizures or continuous seizure activity in which the child does not regain consciousness between seizures.	**<TG PAGE 3-83>**

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c. Prolonged seizures can cause brain damage, especially if associated with either low blood and brain levels of glucose and oxygen.

d. Seizure activity may be subtle, and can look like limpness, eye rolling or blinking, chewing or mouthing motions, cycling movements of the legs, as well as the more easily identified tonic-clonic shaking of extremities. It is helpful for the bystander and the EMS providers to note any asymmetry of movement, including eye deviation.

7 - Diabetic Problems (Individual Chief Complaint)

Review the Diabetic Problems complaint type.

1. Background:

   a. Diabetes is a condition that prevents the body from correctly metabolizing sugar into energy. The body lacks the ability to produce correct amounts of insulin, the hormone that aids in sugar metabolism. This requires the diabetic patient, in many cases, to have to take insulin.

   b. When a diabetic fails to take their insulin they will have a gradual rise in their blood sugar levels. This is a slow onset and results in diabetic ketoacidosis. Ketoacids are a toxic byproduct of this. The body tries to eliminate these toxins through the respiratory system, and the patient may be described as breathing very deeply. The ketoacids can be detected on the patients breath as a fruity or sweet smell. The patient may become very ill

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with flu like symptoms. If this goes unchecked the patient may progress into diabetic coma, a state of unconsciousness caused by extremely high blood sugar levels. Patients often seek medical attention prior to this occurring.

c. When an insulin dependent diabetic takes too much insulin or takes their regular dose and engages in higher levels of activity or fails to eat, the insulin depletes the body's available blood sugar, and the patient experiences a rapid decrease in consciousness. This condition is known as insulin shock. It has a rapid onset with the level of consciousness decreasing until the patient is unconscious. This is by far the most common diabetic emergency faced by EMS.

d. Due to the high reliability of the family's reporting of an insulin reaction or diabetic problem, this protocol should be accessed if the caller indicates that it is a diabetic emergency.

e. The main thing for the EMD to be concerned with is maintaining the patients airway if their level of consciousness is decreased.

f. The EMD should attempt to obtain and relay information regarding the history of the patient.

2. Common Causes:

   a. As noted previously.

3. Common Symptoms Described by Caller (presentation)

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   a. As noted previously.

TRAINEE TEXT	INSTRUCTOR NOTES

4. Instructions Commonly Provided:

   a. Monitor and maintain patient's airway, especially if patient's level of consciousness is decreased or if they are unconscious.

   b. Allow patient to assume a comfortable position.

   c. Administration of sugar or soda-pop to a diabetic patient is left up to local medical control. This is because doing so alters the assessment of the patient by responding personnel and may not have any noticeable effect on the patient's level of consciousness. ***You need to check your local regulations on the administration of sugar to diabetics.***

   d. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

   e. Treat for shock:

      1) Keep airway clear.

      2) DO NOT GIVE FOOD OR DRINK.

      3) Let patient assume position of comfort.

      4) Calm and reassure patient.

      5) Keep the patient warm (maintain body temperature).

   f. Gather or list the patient's medications for the doctor.

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   g. Call back if the patient's condition changes before help arrives.

TRAINEE TEXT	INSTRUCTOR NOTES
h. Lock all pets away because they may interfere with instructions given or attack responding personnel.	
5. Special Pediatric Considerations:	
a. Some children with diabetes have been provided with glucagon, a medication which can be given as a shot to raise blood sugar if the child becomes unconscious or begins seizing with insulin shock. If the caller is able to administer glucagon during such episodes, the EMD should advise that it be given "as your doctor has directed you."	
8 - Headache (Individual Chief Complaint)	**Review** the Headache complaint type.
1. Background:	
a. Since the brain is the organ of concern in patients reporting headache the primary focus of the EMD should be changes in the patient's alertness (level of consciousness) and speech and motor problems. Both indicate more serious causes.	
b. Sudden severe onset of pain may suggest a more serious underlying cause as well (subarachnoid and subdural hemorrhage).	
c. Most other headaches such as migraine, tension, sinus etc. are less serious in nature. EMS is not commonly called for these complaints.	**<TG PAGE 3-87>**

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TRAINEE TEXT	INSTRUCTOR NOTES

2. Common Causes:

   a. Most serious causes of headaches include: meningitis; subdural hematomas and subarachnoid hemorrhage. These are usually reported as having started as a sudden severe onset of pain and are often associated with speech and/or motor problems.

   b. Moderately serious causes include migraines, cluster and other vascular headaches.

   c. Minor causes of headaches include tension, sinus headaches (the common headache) and intracerebral bleeding due to hypertension.

3. Common Symptoms Described by Caller (presentation)

   a. Sudden severe onset of pain associated with speech or motor problems should be considered more serious than a simple complaint of headache without any other symptoms.

   b. History of migraines. The patient may be nauseated and vomiting and be incapacitated with pain.

4. Instructions Commonly Provided:

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   a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting.

   b. Allow patient to assume a comfortable position.

   c. Do not give the patient anything to eat or drink.

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d. Gather or list the patient's medications for the doctor.

e. Call back if the patient's condition changes before help arrives.

f. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

   a. Meningitis is more common in children than adults and is potentially contagious. If the symptoms described include fever, respiratory precautions should be advised for the EMS team dispatched.

9 - Heart Problems (Individual Chief Complaint)

1. Background:

   a. This complaint represents a diagnosis rather than a chief complaint. The EMD must concentrate on looking for symptoms from the caller rather than a presumed diagnosis.

   b. The EMD should attempt to determine if chest pain is present and then proceed to the appropriate protocol for that specific chief complaint.

   c. The EMD should attempt to gain information regarding previous medical or cardiac history. The patient may have an implanted defibrillator or pacemaker that has malfunctioned. These complaints may not always be associated with classic cardiac symptoms.

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Review the Heart Problems complaint type.

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TRAINEE TEXT	INSTRUCTOR NOTES
d. If, after all questioning, the patient is without symptoms, the EMD may attempt to have the caller get a pulse rate on the patient. Many heart problems are manifested by a rapid heart rate. An adult with a resting heart rate of over 140 may be having a heart problem. Slow heart rates can cause decreased consciousness. Any heart rate less than 40 is also cause for concern.	
e. Congestive heart failure may present itself as breathing difficulty, weakness, sweating and the caller may report to you that the patient has been on typical heart medications (like diuretics).	
2. Common Causes:	
a. Electrical malfunctions of the heart resulting in irregular or rapid heart rates.	
b. Acute myocardial infarction.	
c. Malfunctioning internal defibrillators.	
3. Common Symptoms Described by Caller (presentation)	**<TG PAGE 3-90>**
a. Firing internal defibrillator.	
b. Chest pain, difficulty breathing and other cardiac related symptoms.	
c. Irregular or rapid heart rate. Often described as "palpitations".	
4. Instructions Commonly Provided:	
a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting.	

TRAINEE TEXT	INSTRUCTOR NOTES
b. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.	
c. Treat for shock:	
1) Keep airway clear.	
2) DO NOT GIVE FOOD OR DRINK.	
3) Let patient assume position of comfort.	
4) Calm and reassure patient.	
5) Keep the patient warm (maintain body temperature).	
d. Gather or list the patient's medications for the doctor.	
e. Call back if the patient's condition changes before help arrives.	
f. Lock all pets away because they may interfere with instructions given or attack responding personnel.	**<TG PAGE 3-91>**
5. Special Pediatric Considerations:	
a. Common causes of pediatric heart problems include congenital abnormalities of the heart that can cause congestive heart failure or cyanosis and rhythm disturbances, particularly very fast heart rates above 200. Symptoms in the infant and child include those mentioned, as well as poor feeding and change in color or activity level.	

TRAINEE TEXT	INSTRUCTOR NOTES
10 - Ingestions/Poisons/O.D. (Individual Chief Complaint)	**Review** the Ingestions/Poisons/ O.D. complaint type.
1. Background:	
a. An overdose, as defined for dispatch, is a purposeful and intentional ingestion involving any patient over the age of 12 years old. The patient also has a motive for their actions.	
b. An accidental ingestion is defined as an accidental, or unintentional, intake by a child under the age of 12.	
c. A poisoning is defined as an accidental intake of a toxic substance, usually by a child under the age of 12.	
d. All overdose patients should be considered a possible danger to themselves and others. The safety of the scene must be addressed during questioning.	
e. Access to the local poison control intervention line should be established and accessed, when appropriate, according to local policies and procedures.	**<TG PAGE 3-92>**
2. Common Causes:	
a. Accidental ingestions at home are common in children and the elderly (confusion with medication).	
b. Overdoses are related to depression,either as a gesture for help or as a serious suicide attempt.	

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c. Poisonings occurring in the home usually involve a small child who has ingested a family member's medications or some toxic/caustic substance.

3. Common Symptoms Described by Caller (presentation)

   a. Normally described as noted previously.

4. Instructions Commonly Provided:

   a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.

   b. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

   c. Treat for shock:

      1) Keep airway clear.

      2) Let patient assume position of comfort.

<TG PAGE 3-93>

      3) Calm and reassure patient.

      4) Keep the patient warm (maintain body temperature).

   d. In cases of poisoning, do not induce vomiting. If caustic ingestion, have patient drink water or milk until help arrives (CHECK WITH POISON CONTROL CONSULTANTS FIRST, UNLESS OTHERWISE INDICATED IN YOUR EMDPRS).

   e. Do not give the patient anything to eat or drink except in cases of a caustic ingestion of an acid or lye.

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TRAINEE TEXT	INSTRUCTOR NOTES
f. Protect the patient from further injury to themselves if safe to do so.	
g. Contact poison control if ingestion is accidental and the patient is free of symptoms.	
h. Call back if the patient's condition changes before help arrives or if the patient leaves the scene.	
i. Lock all pets away because they may interfere with instructions given or attack responding personnel.	
5. Special Pediatric Considerations:	
a. Poisoning is the most common cause of non-fatal injury in the home. The most common serious poisonings in children involve caustics, hydrocarbon/petroleum, iron (medicinal), antidepressant and cardiac medications.	**<TG PAGE 3-94>**
11 - **Psychiatric/Behavioral** (Individual Chief Complaint)	**Review** the Psychiatric/ Behavioral complaint type.
1. Background:	
a. Psychiatric or behavioral problems can relate to a diagnosed problem such as schizophrenia, mania, depression, etc.	
b. Underlying medical problems often are mistaken for behavioral problems. In diabetics or epileptics, their lowered level of consciousness during or after manifestation may be mistaken for a psychiatric or behavioral problem. Attempt to determine medical history.	

TRAINEE TEXT | **INSTRUCTOR NOTES**

   c. All patients exhibiting psychiatric/behavioral problems should be considered a potential danger to themselves and others.

   d. It should be determined if the patient has a weapon.

   e. If the patient has attempted suicide, the specific EMDPRS chief complaint protocol should be accessed in the EMDPRS and followed to treat the reported situation.

   f. The EMD may want to check if resources exist for crisis intervention.

2. Common Causes:

   a. As described previously.

3. Common Symptoms Described by Caller (presentation)

<TG PAGE 3-95>

   a. Patient exhibiting abnormal or unusual behavior.

   b. Patient threatening violence.

   c. Patient threatening suicide.

   d. Depression.

4. Instructions Commonly Provided:

   a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.

   b. Attempt to protect the patient from themselves.

TRAINEE TEXT	INSTRUCTOR NOTES
c. Attempt to lay the patient down and calm him/her.	
d. Do not give the patient anything to eat or drink.	
e. Gather or list the patient's medication for the doctor.	
f. Call back if the patient's condition changes or if the patient leaves the scene before help arrives.	
g. If available, Crisis Intervention should be contacted. Check with your agency about local regulations on using Crisis Intervention.	
h. Lock all pets away because they may interfere with instructions given or attack responding personnel	
5. Special Pediatric Considerations:	**<TG PAGE 3-96>**
a. In children under 8, many episodes of altered behavior of possible psychiatric origin will in fact be related to underlying toxic exposure, neurologic event or infection, or child abuse.	
12 - Sick Person (Individual Chief Complaint)	**Review** the Sick Person complaint type.
1. Background:	
a. A sick person is a patient who has an undefinable chief complaint, uncategorizable symptoms or when the caller provides specific information on a previous diagnosis.	

TRAINEE TEXT	INSTRUCTOR NOTES
b. This card is accessed when a second party caller reports a diagnosis or some other term to describe what they believe may be the problem.	
c. The function of this protocol is to assist the EMD in identifying the chief complaint or some other significant symptom or medical history, rather than rely on the caller's presumed diagnosis.	
2. Common Causes:	
a. Any illness or malady could potentially be handled on this protocol.	
3. Common Symptoms Described by Caller: (presentation)	
a. Callers often will relate a previous diagnosis.	
b. Nausea, vomiting, weakness, dehydration.	**<TG PAGE 3-97>**
c. These patients have the potential to be very ill, as in the case of a terminally ill patient. Calm and reassure the caller who may have had an emotional response to the situation.	
d. If a specific chief complaint is identified the EMD should use the EMDPRS protocol that suits the patient's chief complaint.	
4. Instructions Commonly Provided:	
a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.	

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- b. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
- c. Treat for shock:
  - 1) Keep airway clear.
  - 2) DO NOT GIVE FOOD OR DRINK.
  - 3) Let patient assume position of comfort.
  - 4) Calm and reassure patient.
  - 5) Keep the patient warm (maintain body temperature)
- d. Gather or list the patient's medications for the doctor.
- e. Call back if the patient's condition changes before help arrives.

<TG PAGE 3-98>

- f. Lock all pets away because they may interfere with instructions given or attack responding personnel

5. Special Pediatric Considerations:
   - a. Children with a pre-existing diagnosis are much more likely than healthy children to have a medical event requiring EMS. Some agencies maintain a roster of children in the community with special or pre-existing health care needs whose safety network relies upon a knowledgeable EMS system familiar with the child's condition, usual complications, emergency treatment, and usual site of emergency and chronic care. Parents and

TRAINEE TEXT	INSTRUCTOR NOTES

caregivers of such children have frequently been equipped with such information and can assist EMS in such situations.

b. It can be difficult to tell whether a child is having an emergency or not. The younger the child, the more vague or nonspecific may be the signs of illness; irritability, crying, vomiting, fever, and lethargy are symptoms that may accompany a wide range of pediatric conditions, many trivial, some life-threatening. Behind the complaint "something is wrong with my child" ("sick, hurt, crying") may be an unsuspected foreign body in the esophagus, intussusception, meningitis, child abuse, or a simple ear infection. Behind the complaint, "my baby had a spell where she was blue, pale, not breathing, unresponsive..." may be something as simple as regurgitation or as complex as seizure, heart rhythm disturbance, apnea or sepsis. Because the symptoms are nonspecific, even the experienced pediatric provider will sometimes have difficulty discriminating between these conditions in person, let alone over the phone. Over-triage is an acceptable response to this ambiguity.

<TG PAGE 3-99>

13 - Stroke/CVA (Individual Chief Complaint)

Review the Stroke/CVA complaint type.

1. Background:

   a. A stroke, or cerebral vascular accident (CVA) denotes a situation where the blood flow has been interrupted to a portion of the brain due to a blood clot, hypertension-induced intracerebral hemorrhage or a ruptured aneurysm.

TRAINEE TEXT	INSTRUCTOR NOTES
b. Although dramatic, the CVA patient usually is not considered a high level medical emergency. The event is fixed, therefore the treatment is rehabilitative.	
2. Common Causes:	
a. Blockage of a cerebral artery.	
b. Ruptured aneurysm.	
c. Dissecting aneurysm.	
d. Intracerebral hemorrhage.	
3. Common Symptoms Described by Caller (presentation)	**<TG PAGE 3-100>**
a. Speech and motor problems. Motor functions diminish on one side of the body.	
b. Numbness and tingling may be present.	
c. History of stroke.	
d. Altered level of consciousness (lower levels of consciousness indicate the event is more severe).	
4. Instructions Commonly Provided:	
a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.	
b. Allow patient to assume a comfortable position.	
c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.	

TRAINEE TEXT	INSTRUCTOR NOTES
d. Treat for shock:	
1) Keep airway clear.	
2) DO NOT GIVE FOOD OR DRINK.	
3) Let patient assume position of comfort.	
4) Calm and reassure patient.	
5) Keep the patient warm (maintain body temperature).	
e. Gather or list the patient's medications for the doctor.	**<TG PAGE 3-101>**
f. Call back if the patient's condition changes before help arrives.	
g. The patient may have difficulty walking, do not let them wander around (they could injure themselvesfurther).	
h. Lock all pets away because they may interfere with instructions given or attack responding personnel	
5. Special Pediatric Considerations:	
a. Symptoms suggestive of a stroke are not common in healthy children but can rarely occur for all the same reasons as in an adult, or because of a complicated migraine. Children with underlying medical conditions like leukemia, renal failure, hemophilia, or metabolic disease are at risk for CVAs. Whoever is attending the child must pay particular attention to the airway in the child.	

TRAINEE TEXT	INSTRUCTOR NOTES
14 - Unknown/Man Down (Individual Chief Complaint)	**Review** the Unknown/Man Down complaint type.
1. Background:	
a. These calls are usually third party calls reporting an unknown situation or a man down and appearing to need assistance.	
b. The third party nature of these cases makes it difficult to get valid, comprehensive information from the caller about the patient's condition.	
c. The questions should help to determine if the patient is alive or not. The third party caller can report if the patient was sitting or standing or lying down and if the patient was seen talking or moving at all to help clarify this question.	**<TG PAGE 3-102>**
2. Common Causes:	
a. Intoxication, trauma, underlying medical complaints.	
b. Virtually anything causing the patient to fall and not get up would be handled with this protocol if the caller was a third party (away from the scene and patient).	
3. Common Symptoms Described by Caller (presentation)	
a. Man down in the park etc., caller not near the patient and little information available.	
b. Medical assist alarms.	

TRAINEE TEXT	INSTRUCTOR NOTES

4. Instructions Commonly Provided:
    a. Return to the patient and establish consciousness, airway and breathing. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
    b. Ask the caller if there is a phone or person closer to the patient that could be used (so you can get better information).
    c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

<TG PAGE 3-103>

    d. Treat for shock:
        1) Keep airway clear.
        2) DO NOT GIVE FOOD OR DRINK.
        3) Let patient assume position of comfort;
        4) Calm and reassure patient.
        5) Keep the patient warm (maintain body temperature).
    e. Watch for and guide the ambulance to the patient.
    f. Call back if the patient's condition changes before help arrives.
    g. Lock all pets away because they may interfere with instructions given or attack responding personnel

TRAINEE TEXT	INSTRUCTOR NOTES
5. Special Pediatric Considerations: a. Unsuspected allergic reaction should be considered.	
Time/Life-Critical Events. Following is a detailed review of the seven Time/Life Critical Events. Your instructor will provide additional information about these, and then you will be given the opportunity to practice using your local EMDPRS for the protocol that corresponds to the chief complaint.	**<TG PAGE 3-104>** **Review** each of the following Time/Life-Critical Events. We suggest you review each event by going over the: 1. Background 2. common causes; 3 common symptoms reported 4. instructions usually given; 5 any special pediatric condiserations the EMD should know. Once you've reviewed these points (for each time/life-critical event), review EMDPRS protocols for the members of your class. If trainees represent many different agencies, you might consider using multiple instructors and breaking the class into groups where EMDPRS can be reviewed individually.

TRAINEE TEXT	INSTRUCTOR NOTES
1 - CO/Inhalation/HAZMAT (Time/Life-Critical Event)	**Review** the CO/Inhalation/HAZMAT complaint type.
1. Background:	
a. The purpose of this protocol is to identify what the situation is, where the patient is, if the patient is trapped in machinery and direct the caller to have someone meet and guide the responding personnel to the patient.	
b. These cases should be handled as case specific, and if the chief complaint can be identified the EMD may go to a more appropriate protocol for the provision of pre-arrival instructions.	
c. These calls are most often third-party calls.	
d. Enclosed spaces present grave danger where chemicals or gases may be present. These are most common in industrial or farm settings. The offending agent may not be obvious. Rescue should only be attempted by trained rescue personnel.	
e. CO is a colorless odorless gas that is the result of incomplete combustion.	
f. Carbon monoxide (CO) poisoning is the most common hazardous material/inhalation complaint encountered in EMS.	**<TG PAGE 3-105>**

TRAINEE TEXT	INSTRUCTOR NOTES

   g. CO binds with the hemoglobin molecule in the blood stream and displaces oxygen and carbon dioxide. This makes this complaint very urgent in that the patient is possibly suffocating at the cellular level. More severe cases of CO poisoning may require hyperbaric treatment in a decompression chamber in order to provide sufficient energy to break these chemical bonds.

   h. Patients can be found in any stage of intoxication. One of the most telling symptoms is the level of consciousness. If the patient is unconscious or has a decreased level of consciousness, they should be assumed to have a severe exposure and immediate transport should be advised.

   i. Other inhalation and HAZMAT situations present should also be assumed to be high level emergencies. The EMD should determine the source and type of exposure and advise the caller to remain safe and away from the hazardous environment. If information regarding the type and source of the exposure is obtained, it must be relayed to the responding crews.

2. Common Causes:

<TG PAGE 3-106>

   a. CO poisoning resulting from smoke inhalation, poorly ventilated heating systems, industrial accidents and automobile exhaust systems.

   b. Most other HAZMAT incidents occur in industrial settings or on the highway, secondary to motor vehicle accidents involving chemical spills. The EMD should be aware of local HAZMAT policies in these cases.

TRAINEE TEXT	INSTRUCTOR NOTES
3. Common Symptoms Described by Caller (presentation)	
a. Headache, nausea and altered level of consciousness are common CO poisoning complaints	
b. In cases of other inhalations and HAZMAT situations, callers may report respiratory difficulty, burning of the eyes, superficial chemical burns, nausea, vomiting and decreased levels of consciousness.	
c. Multiple victims are commonly present if in an industrial or public location.	
4. Instructions Commonly Provided:	
a. Remove patient from hazardous environment **if safe to do so.**	
b. Monitor and maintain patient's airway, especially if patient is described with a decreased level of consciousness or is unconscious.	
c. Irrigate chemical exposures to the skin with water if burns are present.	**<TG PAGE 3-107>**
d. Enclosed spaces present grave danger where chemicals or gases may be present. These are most common in industrial or farm settings. The offending agent may not be obvious. Rescue should only be attempted by trained rescue personnel.	
e. Be aware that the patient may have difficulty walking. Discourage ambulation (Don't let them walk around).	

TRAINEE TEXT	INSTRUCTOR NOTES

f. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

g. Treat for shock:

  1) Keep airway clear.

  2) DO NOT GIVE FOOD OR DRINK.

  3) Let patient assume position of comfort.

  4) Calm and reassure patient.

  5) Keep the patient warm (maintain body temperature).

h. Have someone guide the responding personnel to the patient(s) if in an industrial setting.

i. Call back if the patient's condition changes before help arrives.

j. Lock all pets away because they may interfere with instructions given or attack responding personnel

<TG PAGE 3-108>

5. Special Pediatric Considerations:

  a. CO/inhalation events occur in pediatric aged patients usually in a situation with poorly ventilated home heating, prolonged car travel, or house fires. CO poisoning has been implicated in crib death or Sudden Infant Death Syndrome (SIDS). If the exposure involves multiple victims, there may be variable levels of exposure and symptoms. It is helpful to have specific plans or protocols for the transfer of children to hyperbaric treatment facilities.

TRAINEE TEXT	INSTRUCTOR NOTES
b. HAZMAT situations involving children are uncommon, but may involve multiple children if located at a school or day care facility. Any HAZMAT disaster planning should have provisions specific to the management of single or multiple affected children.	
2 - Cardiac Arrest (Time/Life-Critical Event)	**Review** the Cardiac Arrest complaint type.
1. Background:	
a. Cardiac arrest occurs when the heart ceases to product a productive rhythm, hence no blood is circulated. Respiratory arrest (stopped breathing) usually accompanies cardiac arrests. In this state patients are defined as "clinically dead."	
b. Patients in cardiac arrest who have CPR initiated early and continued throughout the response have a better chance for survival.	**<TG PAGE 3-109>**
c. All patients who are reported to be unconscious and not breathing or who's breathing cannot be verified by a second party caller should be assumed to be in cardiac arrest.	
d. A system of consistent and uniform questioning should be used on all calls to determine if the patient is conscious and breathing and to determine cardiac arrest as soon as possible.	
e. Be certain to determine pulselessness during CPR instruction sequence to avoid chest compressions on patients who are in respiratory arrest only.	

TRAINEE TEXT	INSTRUCTOR NOTES
f. Always determine if the patient has choked on something prior to doing CPR. They may need choking instructions to clear the upper airway obstruction.	
2. Common Causes:	
a. Ventricular fibrillation, acute myocardial infarction, trauma, chronic illness, electrocution, suffocation, drowning, choking.	
3. Common Symptoms Described by Caller (presentation)	
a. Patient unconscious and not breathing, unresponsive.	
b. Patient's color has changed.	
c. Patient described as "making funny or strange noises" (a term used by callers to describe agonal or dying respirations).	**<TG PAGE 3-110>**
1) Agonal respirations are breaths that occur after cardiac arrest and are ineffective in gathering oxygen for the body. They are frequently described as "weak," "heavy," "gasping," "snoring," "gurgling" or "moaning." The rate at which these respirations occur are usually referred to as "weak or heavy," "occasional" or "every once in a while."	
4. Instructions Commonly Provided:	
a. Follow CPR or Choking instructions found in EMDPRS to provide telephone instructions to the caller.	

TRAINEE TEXT	INSTRUCTOR NOTES

b. Lock all pets away because they may interfere with instructions given or attack responding personnel

5. Special Pediatric Considerations:

    a. Unlike adults, children develop cardiac arrest from a multitude of different causes, 10% of which or less having to do with primary heart problems. You will not commonly deal with pediatric cardiac arrest. When you are called upon to do so, it is helpful to realize that some children presumed to be in full cardiac arrest have respiratory arrest only and that recovery from respiratory arrest can be excellent if effective airway support and rescue breathing are begun as soon as possible. It can be very difficult to feel a pulse in infants or small children and there should be as little delay as possible in providing airway support and rescue breathing.

<TG PAGE 3-111>

    b. The child in full cardiac arrest has most commonly been suffering some period of oxygen deprivation and/or and circulatory failure and the outcome of resuscitative efforts is usually very poor. Unlike in adults, timely defibrillation will not often change the outcome of pediatric cardiac arrest. Moreover, basic life support units equipped with semiautomatic defibrillators will usually have weight or age limitations on the use of the equipment. Critical interventions in a pediatric cardiac arrest are airway and breathing management and circulatory support. Units responding to a pediatric cardiac arrest ideally should be skilled in advanced airway management and vascular or intraosseous access.

TRAINEE TEXT	INSTRUCTOR NOTES
- Recommendations for instructions for bystander CPR for children are different than for adults. These differences should be conveyed in specific neonatal, infant and child CPR protocols.	
3 - Choking (Time/Life-Critical Event)	**Review** the Choking complaint type.
1. Background:	
a. Upper airway obstruction constitutes a life critical emergency requiring immediate intervention by the EMD.	
b. Often the only chance for survival of the patient is for the EMD to assist via telephone choking instructions.	**<TG PAGE 3-112>**
c. Patients with a total upper airway obstruction are not able to breathe, speak or cough.	
d. Unless the airway is cleared of the blockage the patient will become unconscious within 1-2 minutes and irreversible brain damage and death will occur in 4-6 minutes.	
e. Choking instructions given over the telephone by trained EMDs are one of the most common life-saving interventions undertaken by the EMD.	
f. A patient who has gagged or has a partial airway obstruction should not have choking instructions provided. If the patient is able to make any sounds through the airway, the patient should not be agitated. If the patient has a cough that seems to be addressing the problem, don't intervene. If the patient	

TRAINEE TEXT	INSTRUCTOR NOTES

appears to be deteriorating, then something should be done. Signs of a partial obstruction are high-pitched wheezing or whistling sounds.

2. Common Causes:
    a. Choking on food and small toys (in children) are the most common causes of upper airway obstructions.
    b. Some situations such as asthma, epiglottis and severe allergic reactions may appear to be choking episodes.
3. Common Symptoms Described by Caller (presentation)

<TG PAGE 3-113>

    a. The patient may have grabbed his/her throat to signal a choking episode.
    b. The patient's color is blue or has changed from it's normal color.
    c. The patient may be unconscious.
    d. The patient may be reported to have been eating.
4. Instructions Commonly Provided:
    a. Follow Choking instruction sequence found in EMDPRS to provide telephone instructions to the caller.
    b. Be sure to avoid performing chest compressions by ascertaining status of pulse during the choking treatment instructions.
    c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

TRAINEE TEXT	INSTRUCTOR NOTES
d. Treat for shock: 1) Keep airway clear. 2) DO NOT GIVE FOOD OR DRINK. 3) Let patient assume position of comfort. 4) Calm and reassure patient. 5) Keep the patient warm (maintain body temperature).	
e. Do not attempt choking interventions on patients who do not have a complete airway obstruction (cannot talk, breathe or speak).	**<TG PAGE 3-114>**
f. Gather or list the patient's medications for the doctor.	
g. Keep caller on the phone until help arrives and takes over from the bystanders.	
h. Repeat choking sequence until help arrives or until the airway is cleared.	
i. Call back if the patient's condition changes before help arrives.	
j. Lock all pets away because they may interfere with instructions given or attack responding personnel.	

TRAINEE TEXT	INSTRUCTOR NOTES
5. Special Pediatric Considerations:	
a. Choking on foreign bodies is a common pediatric problem and one for which pediatricians frequently give safety advice to parents. Small toy parts, latex balloons, mercury batteries and solid food pieces are common causes.	
b. The child who has recovered from a significant choking episode should be evaluated for the possibility of a foreign body that has been aspirated into the lower airway (gone into the body of the lung).	
c. Foreign bodies in the esophagus of young children can sometimes cause choking and respiratory compromise.	
d. Recommendations for instructions for management of choking are different in infants, children and adults. These differences should be conveyed in specific neonatal, infant and child CPR protocols.	**<TG PAGE 3-115>**
4 - Drowning (possible) (Time/Life-Critical Event)	**Review** the Drowning complaint type.
1. Background:	
a. This protocol is intended to be used in those cases of near-drowning incidents ("drowning" is death due to immersion, whereas "near-drowning" is survival from such an event).	
b. If the patient is in cardiac arrest, the EMD should identify the unconsciousness and not breathing status and proceed directly to instructions for CPR.	

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TRAINEE TEXT	INSTRUCTOR NOTES
c. In cases of shallow water diving incidents, the presence of a cervical spinal injury must always be assumed as a possibility. Care should be taken to not move the patient unless absolutely necessary.	
d. In cases of near-drowning, the patient is often found in respiratory arrest only and not in cardiac arrest. This means that frequently, if the patient is discovered quickly, the patient needs only ventilatory support. The EMD must carefully check for pulselessness prior to initiating CPR.	
e. Resuscitation efforts should be undertaken with all victims of near-drowning. No one knows how long a patient can be under water and be successfully resuscitated. There have been documented saves of victims that have been underwater for over an hour.	**<TG PAGE 3-116>**
f. A theory explains that this phenomenon is related to the mammalian diving reflex. Most aquatic mammals are able to exists for long periods of time underwater on lowered levels of oxygen. It is believed that the younger the patient, the longer they can be submerged due to the holdover vestige of the patient's pre-birth disposition where they lived in an aquatic environment on lowered levels of oxygen. Combined with the cold temperature of the water in many cases, the salvageability of the patient is enhanced.	

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2. Common Causes:
    a. Bathtub drownings, pools, ponds and canals (particularly with children).
    b. Shallow water diving incidents resulting in spinal cord injury.
3. Common Symptoms Described by Caller (presentation)
    a. Coughing, difficulty breathing, lowered levels of consciousness, vomiting and change in skin color.
    b. With possible spinal cord injury the patient may also be experiencing numbness, tingling and immobility in the extremities.
4. Instructions Commonly Provided:

<TG PAGE 3-117>

    a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting.
    b. Allow patient to assume a comfortable position. Do not move the patient if a spinal cord injury is suspected due to the mechanism of injury and in cases of shallow water diving incidents.
    c. If the patient is in the water and breathing, support the patient there until help arrives to remove the patient from the water.
    d. Treat for shock:
        1) Keep airway clear.
        2) DO NOT GIVE FOOD OR DRINK.

TRAINEE TEXT	INSTRUCTOR NOTES
3) Let patient assume position of comfort.	
4) Calm and reassure patient.	
5) Keep the patient warm (maintain body temperature).	
e. Call back if the patient's condition changes before help arrives.	
f. If patient is found to be unconscious and not breathing proceed immediately to CPR treatment sequence and initiate CPR.	
g. Lock all pets away because they may interfere with instructions given or attack responding personnel.	**<TG PAGE 3-118>**
5. Special Pediatric Considerations:	
a. Drowning is a major cause of unintentional death in young children. Near-drowning, or submersion injury followed by survival, is one critical pediatric emergencies for which you may receive calls for help. For these calls, field management is vital. The real window of opportunity for medical intervention is in the hands of the bystander, EMD, and EMS responders in the field.	
b. The injury in near drowning is global oxygen deficit. The goal of treatment is to reverse that deficit with rapid, effective airway support, rescue breathing and other advanced airway management techniques.	

TRAINEE TEXT	INSTRUCTOR NOTES
c. Although children are given rescue breathing at lower volumes and pressure than adults, wet lungs are stiffer and harder to move. In giving bystanders pre-arrival instructions, make sure that the chest is moving.	
d. Vomiting is common in submersion victims and can complicate the airway support, particularly if it is not anticipated.	
e. Children are more likely than adults to continue to lose body heat when wet, even in warm weather. Replacing wet clothes if possible will minimize heat loss.	
f. Near-drowning, like most other critical pediatric injuries, is best managed with prevention. Restricting unsupervised access to known water hazards, promoting swimming lessons and teaching bystander CPR are some primary and secondary prevention strategies that EMS systems can advocate.	**<TG PAGE 3-119>**
5 - Electrocution (Time/Life-Critical Event)	**Review** the Electrocution complaint type.
1. Background:	
a. All electrocutions should be considered cardiac arrests until proven otherwise.	
b. Often falls are associated with electrocutions. Always consider the possibility of a long fall.	

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TRAINEE TEXT	INSTRUCTOR NOTES

c. The primary concern should be gathering information regarding the safety of the scene and protecting the bystanders by advising them to beware of electrical risks and protecting the rescuers by relaying information about scene safety.

d. Electrocutions are often associated with internal burns.

e. All electrocutions should be considered high level emergencies.

2. Common Causes:

   a. Industrial accidents, electrical and utility workers electrocuted by coming in contact with high voltage wires. These are often associated with long falls. Always consider the possibility of other associated trauma as a result of the fall, and take spinal precautions.

   b. Construction accidents.

   c. Household accidents associated with electrified water.

   d. Lightning strikes.

3. Common Symptoms Described by Caller (presentation)

   a. Cardiac arrest.

   b. Burning sensation or surface burns at contact point. Also there may be burns at the point of grounding.

   c. Cardiac related problems.

<TG PAGE 3-120>

TRAINEE TEXT

4. Instructions Commonly Provided:

   a. Advise the caller to not come in contact with the electrical source and to beware of electrified water. The caller may attempt to disconnect the electrical source if safe to do so.

   b. Monitor and maintain patient's airway, especially if patient has a lowered level of consciousness.

   c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

   d. Treat for shock:

      1) Keep airway clear.

      2) DO NOT GIVE FOOD OR DRINK.

      3) Let patient assume position of comfort.

      4) Calm and reassure patient.

      5) Keep the patient warm (maintain body temperature).

   e. Do not move the patient if a fall is involved.

   f. Call back if the patient's condition changes before help arrives.

   g. Contact with appropriate utility to secure the scene should be made as soon as possible. This includes P.D. and Fire Department for traffic control and scene control of downed wires in the case of traffic accidents.

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<TG PAGE 3-121>

TRAINEE TEXT	INSTRUCTOR NOTES
h. Lock all pets away because they may interfere with instructions given or attack responding personnel.	
5. Special Pediatric Considerations: - NONE	
6 - Pregnancy/Childbirth (Time/Life-Critical Event Type)	**Review** the Pregnancy/ Childbirth complaint type.
1. Background:	
a. Gestation encompasses three trimesters or time periods. The first trimester includes months 1, 2 and 3. The second trimester includes months 4, 5, and 6. The third trimester includes months 7, 8, and 9.	
b. As the pregnancy progresses the severity of complications increases for both the mother and the child.	
c. Bleeding and other complications that occur during the first seven months of the pregnancy usually represent a miscarriage situation.	**<TG PAGE 3-122>**
d. Often the chief complaint will not be related to the pregnancy. If there seems to be no relationship with the pregnancy, the appropriate chief complaint protocol should be accessed, even if the caller informs you of the pregnancy.	
e. Pregnancy is a condition, not an illness.	

TRAINEE TEXT	INSTRUCTOR NOTES
f. Pregnancy complications in the first and second trimesters, along with vaginal bleeding situations related to gynecological problems, should be handled symptomatically. Usually this requires treatment for shock.	
g. An imminent birth is defined as any prima gravida woman in her third trimester (first child) with labor pains less than two minutes apart. Any multigravida woman (second + third child) having labor pains less than five minutes apart should be considered an imminent birth as well.	
h. An imminent birth situation also exists if any part of the baby is showing or the mother complains that the pains are constant and/or she has the urge to push.	
2. Common Causes:	
a. Gynecological complaints most often reported include unusually heavy menstrual bleeding or untimely vaginal bleeding.	
b. Pregnancy related problems included in the first or second trimester usually relate to vaginal bleeding or abdominal pain.	**<TG PAGE 3-123>**
c. Imminent births include complaints of labor pains as described above, constant labor pains and/or baby parts showing.	
3. Common Symptoms Described by Caller (presentation)	
a. Untimely vaginal bleeding with associated shock symptoms.	

b. Onset of labor, water breaking, etc.

c. Imminent birth as defined above.

4. Instructions Commonly Provided:

FOR CHILDBIRTH:

a. Do not try to prevent the birth by holding the legs together or crossing the legs.

b. Have mother remove all clothing below the waist.

c. Get mother on the bed or floor and prop her back up with pillows.

d. Have mother take deep breaths during the pains and try not to push.

e. Follow specific childbirth pre-arrival instruction scripts as written in the approved EMDPRS.

FOR PREGNANCY PROBLEMS:

<TG PAGE 3-124>

a. The most common complaint related to pregnancy problems is untimely vaginal bleeding and associated abdominal pain. Symptoms of shock may be described by the caller as pallor, dizziness or lowered level of consciousness, chills, diaphoresis (sweating).

b. Treat for shock:

   1) Keep airway clear.

   2) DO NOT GIVE FOOD OR DRINK.

TRAINEE TEXT	INSTRUCTOR NOTES

    3) Let patient assume position of comfort.
    4) Calm and reassure patient.
    5) Keep the patient warm (maintain body temperature).

APPLICABLE TO BOTH:

- a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
- b. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
- c. Treat for shock:
  - 1) Keep airway clear.
  - 2) DO NOT GIVE FOOD OR DRINK.
  - 3) Let patient assume position of comfort.
  - 4) Calm and reassure patient.
  - 5) Keep the patient warm (maintain body temperature).
- d. Gather or list the patient's medications for the doctor.
- e. Call back if the patient's condition changes before help arrives.
- f. Lock all pets away because they may interfere with instructions given or attack responding personnel.

<TG PAGE 3-125>

TRAINEE TEXT	INSTRUCTOR NOTES
5. Special Pediatric Considerations:	
a. The pregnant child (under 16) is more likely than an older woman to have become pregnant under circumstances of coercion, rape, incest, or under the influence of drugs or alcohol. She may have sought unusual means to terminate the pregnancy. Some states allow for protection of confidentiality to pregnant minors; consult your local regulations in this regard.	
7 - Unconscious/Fainting (Time/Life-Critical Event)	**Review** the Unconscious/ Fainting complaint type.
1. Background:	
a. Unconsciousness denotes a state of consciousness from which an individual cannot be aroused, even with painful stimulation.	
b. A fainting episode denotes a situation from which an individual has previously fainted and has now awakened.	**<TG PAGE 3-126>**
c. Single fainting episodes (such as a syncopal episode where the patient faints and then returns to a normal consciousness level) are not considered generally to be high level emergencies, though you should treat all faintings with respect until you are certain there is no immediate danger.	
d. Multiple fainting episodes are considered to be more serious.	
e. The primary function of this protocol is to ensure that the patient has an open airway and that it is maintained until help arrives (airway control).	

TRAINEE TEXT	INSTRUCTOR NOTES
f. This protocol should be used when there has been a faint or if the patient is unconscious and the caller does not know why. If the patient is an unconscious diabetic, or seizure patient, the EMD should utilize those protocols specifically.	
2. Common Causes:	
a. Stroke, diabetes, cardiac arrest, overdoes, poisonings, intoxication, head injuries, hypoxia, seizures, simple fainting episodes, shock and heart rhythm problems (too slow or fast).	
b. Conceivably anything that effects the brain in a negative way can render the patient unconscious.	
3. Common Symptoms Described by Caller (presentation)	**<TG PAGE 3-127>**
a. Fainting episode or episodes of unconsciousness for unknown reasons.	
4. Instructions Commonly Provided:	
a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.	
b. Lay patient on his back and monitor respirations. Turn patient on their side if vomiting occurs.	
c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.	

TRAINEE TEXT	INSTRUCTOR NOTES

d. Treat for shock:

  1) Keep airway clear.

  2) DO NOT GIVE FOOD OR DRINK.
  3) Let patient assume position of comfort.

  4) Calm and reassure patient.

  5) Keep the patient warm (maintain body temperature).

e. Gather or list the patient's medications for the doctor.

f. Call back if the patient's condition changes before help arrives.

g. Lock all pets away because they may interfere with instructions given or attack responding personnel.

<TG PAGE 3-128>

5. Special Pediatric Considerations:

a. Fainting or unconsciousness in the pediatric patient can be similar to the adult patient in underlying cause and degree of severity. However, there are several special circumstances to consider. In the infant, ***Apparent Life Threatening Events (ALTE)*** may occur from all the same causes mentioned in the general discussion, as well as from washing of stomach contents up the esophagus (reflux), unsuspected or unreported child abuse, serious bacterial infection and primary apnea (stopping breathing) related to immature respiratory reflexes. Usual reported sysmptoms will include limpness or stiffening, unresponsiveness, pallor or

TRAINEE TEXT	INSTRUCTOR NOTES
blue spell, which resolve either spontaneously or with attempts at resuscitation or stimulation. All such infabnts should be evaluated promptly regardless of how	
b. Infants and toddlers are subject to a particular kind of breath-holding spell that is very alarming to witness but usually self-limited. Typically the toddler will become angry or distressed about something and while crying suddenly hold his or her breath, sometimes to the point of unconsciousness, turning blue and possibly resulting in seizures. The hallmark of these episodes is that they occur while the child is crying and resolve on their own after a matter of seconds. A second variety of breath-holding in toddlers and young children is related to the fainting adults have when witnessing a distressing event. This spell usually occurs when the child turns pale and becomes unresponsive after a sudden but trivial injury. Both varieties may be difficult to distinguish from more concerning problems unless the child has done this in the past.	**<TG PAGE 3-129>**

TRAINEE TEXT	INSTRUCTOR NOTES
Summary	
This unit has trained you on the medical content and design of the thirty-two chief complaint types. You have learned about the three types of complaints, and have been trained on the use of your local EMDPRS protocol.	**Review** the unit. Ask for (and answer) trainee questions.
Next, you will complete the course by taking part in a final examination. The exam is comprehensive. It covers all material taught in this course. There will be role-play scenarios where you will be evaluated on your ability to use the knowledge you have gained.	

PRESENTING THE
32
CHIEF COMPLAINT TYPES

Helpful Hints:

The protocols should be separated into three groups and taught in the order of traumatic incident types first, medical complaints second and then the time/life-critical events. This approach is helpful because each grouping of incident types has a different focus during caller interrogation.

Approximately 15-20 minutes can be spent on each protocol as a rule, longer for some, less for others. There are many videos available that demonstrate dispatcher interventions in cardiac arrest, choking and childbirth situations that are very useful in lecture. You might want to check with the guidance committee (or medical director) to see if any of these are available, or if they could be purchased.

After discussing each section of chief complaint types, trainees should have about one hour of practical scenario role playing in which each student has the opportunity to be the caller and the dispatcher. This should be a supervised role play session with no more than 5-6 students in a group. Additional instructors are useful during this time if there are more than 3 or 4 groups.

Present the Chief Complaints in the Following Order:

Traumatic Incident Types

1) Animal Bites
2) Assault
3) Burns
4) Eye Problems
5) Fall Victim
6) Heat/Cold Exposure
7) Hemorrhage/Laceration
8) Industrial Accidents
9) Stab/Gunshot Wound
10) Traffic Accident
11) Traumatic Injury

MODULE 3 - IG NOTE #1

Basic Emergency Medical Dispatch Concepts

Medical Chief Complaint Types

1) Abdominal Pain
2) Allergies
3) Back Pain
4) Chest Pain
5) Breathing Problems
6) Convulsions/Seizures
7) Diabetic Problems
8) Headache
9) Heart Problems
10) Ingestions/Poisonings
11) Psychiatric Problems
12) Sick Person
13) Stroke/CVA
14) Unknown Problem/Man Down

Time/Life-Critical Events

1) CO Poisoning/HAZMAT
2) Cardiac Arrest
3) Choking
4) Drowning
5) Electrocution
6) Pregnancy/Children
7) Unconscious/Fainting

For Each Chief Complaint Discuss:

For every chief complaint, consider discussing the protocols in this order:

- Background;
- Common causes;
- Symptoms frequently reported by callers;
- Instructions commonly given to callers;
- Common pediatric considerations (if any) and
- then review the local EMDPRS protocol regarding the complaint.

Flow of Call Processing

Caller places call for help

EMD conducts initial survey

Based on information gathered, EMD turns to proper card

EMD gets clarifying information

EMD dispatches resources

EMD gives instructions as required

Individual Chief Complaints

- *Based on acute or chronic biological illness*
- *Proper responses based on...*
  - *chief complaint*
  - *patient's age*
  - *priority symptoms identified*
  - *relevant medical history*

Traumatic Incident Types

- *Based on some physical injury due to accident or violence*

- *Responses based on...*

  - *mechanism of injury*
  - *location of injury (core or extremity?)*

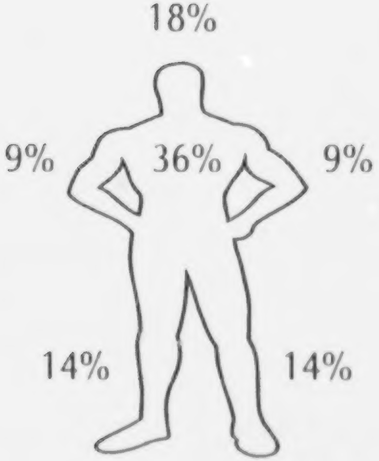
Time/Life-Critical Events

- *Pose greatest danger to patient, bystanders or responders*
- *Responses based on...*
  - *scene safety information*
  - *police, fire, HAZMAT, etc. needs*

EMDPRS Determines...

- *Order of EMD actions*
- *When to dispatch resources (types and configurations included)*
- *Assigns mode and configuration to responding personnel*
- *Tells when to give telephone medical instructions*
- *Tells when/how to end the call*

Rule of Nines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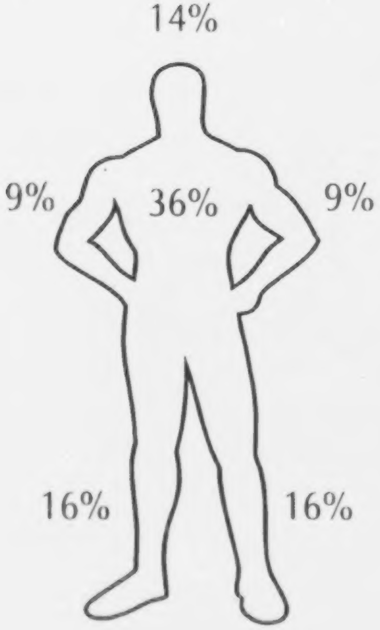
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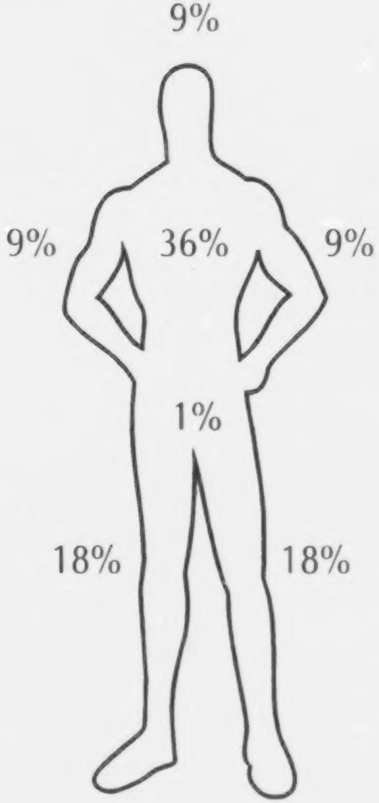
5 years old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Adult

MODULE 4
Practical Examination

TRAINEE TEXT

MODULE OVERVIEW

Module 4 is the final practical exam for the NHTSA EMD training curriculum. You will demonstrate the proper and effective use of the knowledge that you have gained throughout this course.

The practical exam will assist the instructor(s) in determining your readiness for the job of emergency medical dispatcher. As a result, you will likely be asked to demonstrate proficiency in all areas of EMD in a comprehensive format. You should be prepared to deal with all thirty-two chief complaint types. You will be tested, however, on only sixteen "real-life" simulations. These scenarios are conducted between the instructor and you, or you may be asked to participate in acting out a scenario with another trainee as the instructor(s) observe you. The instructor will decide on which types of complaints you will be tested.

MODULE OBJECTIVES

Upon completion of this module, you will:

1. Demonstrate effective and proper EMD behaviors.

INSTRUCTOR NOTES

<TG PAGE 4-1>

Introduce the Module. Describe what will happen during the final exam.

State the module objective(s).

MODULE 4
Practical Examination Instructor Preparation

A final exam must be developed for this course by your local medical control and/or your local EMD guidance committee. All exams should be representative of the local training you are providing. The exam should cover medical and legal concepts as well as EMD specific material. Questions about the development of the final examination should be addressed to your local medical control and/or to your local EMD guidance committee.

1. Be sure to have all scenarios, audio/video tape and other testing materials ready prior to testing.

TRAINEE TEXT

EXAM OVERVIEW

The NHTSA course practical examination will consist of simulated or scripted calls for emergency medical assistance. You will be assessed on 16 of the 32 chief complaint types.

You will be assessed on your knowledge and demonstration of the skills required for effective dispatch including:

1. Proper telephone techniques;
2. Proper handling of difficult callers;
3. Proper use of EMDPRS to elicit dispatch information;
4. Proper use of the EMDPRS to allocate resources based on use of information gathered;
5. Proper identification of medical emergencies and
6. Proper delivery of medical instructions from the EMDPRS.

Simulations and scripted role plays will be based on actual 9-1-1 calls. Actual 9-1-1 calls will be used to develop these simulations. Transcriptions might be used when available and cost effective. In either case, caller identification information contained in the calls will be removed and replaced with false data to protect the identity of the callers.

INSTRUCTOR NOTES

<TG PAGE 4-3>

Introduce the final examination.

Tell trainees what they will be evaluated on.

NOTE

You will need to develop a written exam and practical exam as final examination(s) for this course. All exams should be representative of the local training you are providing. The exam should cover medical and legal concepts as well as EMD specific material. Questions about the development of the final examination should be addressed to the local medical control and/or to the local EMD guidance committee.

TRAINEE TEXT	INSTRUCTOR NOTES
EXAM OBJECTIVES	
Final Exam Terminal Objective	
Upon completion of this exam, you will be able to:	**State** the exam learning objective(s).
1. Demonstrate effective and proper EMD behaviors.	

APPENDIX OVERVIEW

This appendix is designed to assist you in improving your presentation skills and training techniques. It is not an in-depth review of adult learning theory. If you have little or no experience with training, this appendix is essential. For the reader who is a bit more experienced, we hope this will help you sharpen your skills, and perhaps learn a few new ones.

You will learn some hints for working with adults along with presentation skills and delivery methods, facilitation skills and ways to handle difficult trainees.

I. Adult Learning Hints

Some key points to remember when working with adults include:

1. the presentation must relate to real world experience;
2. hands-on experience is best for retaining information;
3. most learners want training to be practical, rather than touchy-feely;
4. make sure the materials are clearly presented, that adults can both see and hear;
5. adults need breaks every 50-60 minutes;
6. tie learning to past experiences (driving a car, baking a cake);
7. allow adults to control the pace at which they learn;
8. use feedback liberally and
9. review material and allow application time before going on to new ideas.

II. Presentation Skills

This section introduces you to the communication skills that are needed to facilitate learning. We discuss the various delivery methods that are available for presentations, including having more than one person present. We will also cover how to interact with different types of participants in your audience.

1. Verbal Skills

A presenter's voice is his/her chief means of communicating with participants. A good communicator:

- Defines jargon and technical language.
- Resists the urge to rush.
- Uses pauses.
- Doesn't patronize or condescend.
- Praises often.
- Is positive.

There are things you can do, skills you can use, to maximize your presentation:

- Minimize the use of filler words (uhm, ok, like).
- Voices tend to raise when the speaker is nervous. Make a conscious effort to bring your voice down.
- Slow down.
- Avoid monotone delivery.
- Avoid being too soft or quiet.

2. **Body Language**

Energy and enthusiasm will reflect confidence and conviction. If verbal and nonverbal communication support each other, people will have an easier time understanding the message. If they conflict, you'll lose your audience. Positive body language includes:

- Eye contact.
- Posture.
- Movement.
- Gestures.
- Facial expressions.
- Eye contact
    - ➔ Makes the presentation personal.
    - ➔ Shows interest.
    - ➔ Establishes rapport.
    - ➔ Creates trust.
    - ➔ Projects confidence.
- Posture and movement
    - ➔ How you hold yourself physically can reflect how you hold yourself mentally, so stand tall and project confidence.
    - ➔ Movement can also help project a positive image. It focuses your audience's attention. When you move, you are reducing your own stress by giving yourself time to pause and collect your thoughts.

- ➔ Be careful of too much movement because it will look like you are nervous. You want to move, but don't pace. When you are moving around the room be aware of other's space so that you don't invade it by getting too close.

- Gestures and facial expressions are important ways to instill confidence. Try to:
  - ➔ Smile.
  - ➔ Keep your hands out of your pockets.
  - ➔ Use your hands when you talk.
  - ➔ Keep from playing with objects.

3. **Nervousness**

Contrary to popular belief, some degree of nervousness can be good for you and your presentation. Positive nervousness provides energy and gives an edge to your presentation. It proves that you think your audience is worth being nervous about. Rather than fighting it, it is easier to admit it and turn it to your advantage. Don't allow your nervousness to become too distracting and make your audience nervous.

Some solutions to nervousness are:

- Take a brisk walk before class.
- Know your subject matter.
- Look at your audience realistically.
- Know your platform completely.
- Visualize yourself as a success before the class begins.
- Consider using a warm-up routine each time you are preparing to present.

4. Feedback

Proficiency comes with experience and feedback. We can improve feedback by:

- Reinforcing what has been done well.
- Identifying areas for improvement and ways to do things better.

III. Delivery Methods

There are several delivery formats available to you for making presentations, whether you are a presenter or trainer.

1. Lecture

In the past, trainers have relied too heavily on lecture as a delivery method. When lecture is the only method for presenting a course, participants find it boring because they are not getting opportunities to interact. When you are preparing to present training, consider ways to balance lecture with other methods.

2. Group Discussion

Another method of delivery is group discussion. You may find opportunities to incorporate group discussions in your presentation. The size of the discussion groups can range from 3-6 participants to the entire audience. If you use small group discussions frequently, encourage participants to interact with different people each time. It provides participants with an opportunity to work with others and share ideas.

3. Discovery

The discovery method allows participants to explore. Participants identify what they need to learn and then find ways to fulfill those needs. They can use the resources in the classroom to experiment and feel comfortable with the subject matter before they leave the classroom.

4. **The Team Approach**

The team approach is another delivery method. The team might consist of a lead instructor and a backup instructor. Each person will play a vital role in the success of training. These roles include:

a. Lead Instructor

- Presents the course.
- Decides what areas will be covered.
- Initiates activities.
- Answers agency-specific questions.

b. Backup Instructor

- Provides one-on-one coaching.
- Answers training-related questions.
- Assists lead instructor with delivery.
- Supports activities.

5. **More Than One Instructor**

In some cases, more than one instructor may be teaching a class. There are several options when more than one instructor is available.

a. Each instructor can teach a separate lesson.

b. Two instructors can split a lesson.

c. One instructor can teach the content while the other instructor leads the activities.

The instructors who are not teaching at a particular moment should be available to assist participants by:

d. Answering questions.

e. Facilitating group discussions and activities.

f. Providing one-on-one coaching.

g. Answering training-related questions.

h. Assisting lead instructor with delivery.

i. Supporting activities.

IV. Facilitation Skills

Your presentation will be more effective when people become involved and participate in the presentation. Facilitation skills are a way to involve the learners by showing interest in the audience and making people feel free to comment and ask questions. Facilitation skills also help you to obtain feedback from the audience about how the presentation is received. Then you can respond to your audience's needs more appropriately.

1. Facilitator Responsibilities

a. Ensure that all participants have a chance to talk.

b. Ensure that everyone is protected from personal attack.

c. Ensure that no one is allowed to dominate discussions.

d. Focus and direct the group.

e. Aim class discussions toward the course objectives.

2. Observe The Participants' Reactions

a. Observation skills help you assess how the presentation is being received. Based on your observations over time, you can make decisions to continue as planned, or to modify the presentation to respond to the audience's needs.

b. To use observation skills, start by looking at people's faces, eyes, body positions and body movements. Are their eyes glazed over? Do you see concern or confusion on their faces? Then see how they respond to the material. Are they enthusiastic or reluctant? When discussions occur, does everyone take part, or do most people stay quiet?

c. Based on class reactions, modify your approach. Ask questions to determine whether you are going too fast, too slow, too loud or too soft. Your presentation may be too technical or too simple. Find out, then modify your approach.

3. **Listening Skills**

a. The goal of active listening is to communicate that you are interested in the speaker and that you understand his/her message. When you are listening, use active steps to listen to the full message, which includes words and non-verbal signals. Examples of active listening steps include:

- Show interest in what the speaker is saying through active listening, for example, "I understand" or "Uh huh."
- Respond as appropriate.
- Express understanding of the message by paraphrasing.
- Use an empathy statement, for example, "I see your point of view."

4. **Enhancing Audience Self-Esteem**

Maintaining or enhancing self-esteem means treating people with respect and helping them feel good about their efforts in the course. It means letting them know that their contributions are worthwhile and appreciated.

5. **Effective Questioning And Answering**

Questions play a major role in effective presentations. The skills associated with questioning include:

502

a. Asking appropriate questions.

   b. Handling answers to the audience's questions.
   c. Responding to questions from the audience.
   d. Repeating questions from the audience before answering.
   e. Allowing participants time to answer your questions.
   f. Repeating answers from participants so everyone can hear the answers.

6. **Asking Questions**

   Good techniques for asking questions include the following:

   a. Direct the questions for specific information.
   b. Ask questions throughout your discussion.
   c. Direct questions to the entire class.
   d. Use follow-up questions to expand the discussion.

V. Handling Different Types of Participants and Challenging Situations

When you are leading training or giving a presentation, you will encounter various types of participants and situations. There are situations that can occur that you may need to deal with, for example, when you are lecturing and two participants are talking to each other. How you handle these situations may affect the attitudes of the participants and the success of the presentation. Listed below are some characteristics and tips for handling different types of participants.

1. **Hesitant Participant**

   This person is shy, reluctant and silent most of the time. Strategies for dealing with the hesitant participant include:

   a. Use a lot of small group activities.
   b. Call on them from time to time; offer encouraging statements.

c. Ask this person questions you know they can answer.

2. **Monopolizing Participant**

This participant talks all of the time and keeps others from having an opportunity to speak. S/he thinks and speaks quickly, has strong eye contact and a strong need to win. Strategies for dealing with the monopolizing participant include:

a. Tell this person that you would like to get another opinion on a particular issue.

b. Let him/her know that you appreciate his/her input but that everyone needs an opportunity to participate.

3. **The Voice Of Experience Participant**

This person has a tremendous need to be heard. S/he likes to share his/her knowledge with everyone by using big words, lots of statistics and name dropping. Strategies for dealing with the voice of experience:

a. Be polite, but tel! him/her that the group needs to move to the next point.

b. Redirect the group to the main topic.

4. **Non-listening Participant**

This participant tends to interrupt, cut others off and jump in before others have a chance to speak. Strategies for dealing with the non-listening participant include:

a. Insist that others need an opportunity to participate.

b. Ask this person to restate what someone else has said.

c. Ask for an analysis of how his/her viewpoint compares with what another participant has said.

5. **Idea-zapping Participant**

This person is an expert at putting down other people's ideas. S/he finds creative ways to inhibit suggestions from others. Strategies for dealing with the idea-zapping participant include:

a. Rescue the idea before the entire group dismisses it.

b. Ask if this participant can come up with her/his own idea.

c. If you like an idea that was zapped, do not hesitate to agree with it.

6. **Complaining Participant**

This person is a master at blaming, fault-finding, griping and sharing his/her endless pet peeves. Strategies for dealing with the complaining participant include:

a. Ask this participant questions that will force her/him into a problem-solving mode.

b. Encourage him/her to consider the other point of view.

7. **Rigid Participant**

This participant takes a position on an issue and will rarely move from it. Sh/e makes it difficult for the group to make any progress. Strategies for dealing with the rigid participant include:

a. Get her/him to admit that there is another side to the issue.

b. If this participant supplies some data or opinion contrary to his/her own, follow up on this.

8. **Hostile Participant**

This person is antagonistic, aggressive and unfriendly. S/he looks for opportunities to disagree and embarrass others. Strategies for dealing with the hostile participant include:

a. Avoid getting wrapped into a debate.

b. Keep your cool and simply rephrase the question in a milder, objective way.

c. Remember that no trainer ever won an argument with a participant.

9. **Angry Participant**

This participant's behavior ranges from silence and withdrawal to constant complaining. S/he looks for holes in your ideas and presents impossible "what if" scenarios. Strategies for dealing with the angry participant include:

a. Do everything you can to eliminate possible threats from the training.

b. Consider the use of activities to allow venting of frustration in a positive manner.

10. **Negative Participant**

This person finds the gloomy side of things. S/he brings up past grievances and complaints. Strategies for dealing with the negative participant include:

a. Ask her/him if s/he can find anything positive in the situation.

b. Sometimes it helps to respond by saying, "I understand."

11. **The Clown Participant**

This participant hinders group progress and annoys others with his/her abundance of ill-fitting humor. Strategies for dealing with the participant who is a clown include:

a. Call on her/him on occasion for serious dialogue.

b. Compliment him/her when s/he makes a worthwhile contribution.

c. Do not reward her/him attempts at humor.

APPENDIX B
Sample Scenarios for Use in Training

Overview

Appendix B represents sample scenarios that you, the instructor or person responsible for training development, can use to develop your own set of scripts. The scripts you develop can be used wherever scripts are recommended for practice, as noted in the Instructor's Guide.

The scenarios you will find in this appendix are based on real-life calls received by the American Medical Services, San Diego EMS Dispatch Center. Please note that the scenarios presented here are based on a 9-1-1-E system where the caller's address and phone number are displayed on the dispatcher's CAD terminal (Computer-aided dispatch).

The scenarios are divided into three sections:

1. **Background**, where you are presented introductory information regarding the scenario;
2. **Script**, where you see the actual transcriptions of calls and the conversations of the dispatcher and the caller; you would use these wherever you want to use a role play to teach a specific concept or to give trainees practice and
3. **Results**, where you find out the results of the call, as they actually happened.

Scenario Hints

- *When developing scenarios for use in training, make them realistic to the local area* (include local jargon, colloquial expressions, etc.).
- *You should include a section of answers that you want to get from the trainees.* This would include any observable behaviors that an instructor should look for.
- *Create many different scenarios.* If developing scenarios that the trainees are to cirtique, be sure to include examples of good and bad EMD behaviors. If any judicial actions were taken on the particular scenario (if based on a real case), be sure to include the results of the case as it was adjudicated.

SCENARIO #1

BACKGROUND The caller was responsible for the injury to his roommate. It was obvious to the dispatcher that the caller's primary language was not English, and to make things even more confusing, the caller was being very evasive with the EMD in reporting the incident and answering the dispatcher's questions.

SCRIPT

EMD: Medical emergency operator 10.

CALLER: This is 3083 Park Av. and there's two guys are sleeping in the same apartment and one has shot the other with an arrow......on the neck and uhaaaa.....

EMD: Ok, what address are they at?

CALLER: The 3089 Park Av.

EMD: I show you calling from 3079 Park Av.?

CALLER: Yes, yes 308 uh, I'm sorry...30.....3083....

EMD: Ok, this is your neighbor?

CALLER: Yes, it is.

EMD: ...and someone got stabbed in the neck with an arrow?

CALLER: Yes.

EMD: Ok, and is the arrow still in his neck or what?

CALLER: Well...uh...now, I don't think it's any serious thing. Well it's serious...he says it's serious, you know.....

EMD: Is the person who did this still there?

continued...

CALLER: Yea, still here yea.

EMD: Ok PD were going to be responding and we're going to stand back.

PD: Ok.

EMD: Sir can you take a clean cloth and put some direct pressure on.....

PATIENT: You don't understand.....the arrow is through the back of my neck and it is through my head sticking out of my eye!

EMD: Sir, listen to me, is the arrow still inside you?

PATIENT: Huh!

EMD: Is it still in through your neck?

PATIENT: Yes!

EMD: Ok.....

PATIENT: It's through my head and it's sticking through my eye on the other side!

EMD: Ok, what I want you to do then.....is it bleeding?

PATIENT: Yes!

EMD: Ok...

PATIENT: Blood is coming out of my nose!

EMD: Ok, I have help on the way, we'll be there in a few minutes...what I want you to do is, sit down. Can you take a clean cloth....don't move the arrow at all...ok? Just try to put direct pressure anywhere you can to stop the bleeding. You need to sit down though, ok?......

PATIENT: Yes.

continued...

EMD: You may start feeling a little faint.

PATIENT: Yeah.

EMD: Who ever did this, are they still there?

PATIENT: I didn't know I'm not in that apartment, I'm next door now.

PD: Sir, who shot you?

PATIENT: The guy I'm staying with....I was sleeping and all of a sudden I felt this thump!

RESULT: The arrow did not strike anything vital and was successfully removed from the patient's head. The patient did not lose his eye and made a complete recovery.

SCENARIO #2

BACKGROUND: This call was received from a twenty one year old male, the son of the patient. The son observed the father slump and fall over while mowing his back yard.

SCRIPT:

EMD: Medical emergency number 9.

CALLER: Yes, I think I have a stroke.

EMD: Ok, what's your address?

CALLER: 3559 Ash St.

EMD: What's your phone number?

CALLER: 395-2686

EMD: Ok, how old are you?

CALLER: Ah, 21

EMD: What makes you think you're having a stroke?

CALLER: No, not me, my father.

EMD: Ok, how old is he?

CALLER: Ah, 50.

EMD: ...and what's he doing?

CALLER: Well, he was....he was mowing in the back yard. Then I saw him...just kind of lean over then he just fell over.

EMD: Ok, is he awake now?

continued . .

CALLER: Ah, I think he is but he's not really moving.

EMD: He's unresponsive or....

CALLER: Ah, I didn't...I just ran to the phone as soon as I saw it..

EMD: Ok, what's he doing right now? I have help on the way so go see what he's doing so I can help you, ok?........

<A LONG PAUSE>

CALLER: I turned him over on his back and he doesn't seem to be breathing.

EMD: Ok, do you know CPR?

CALLER: No.

EMD: Ok, I can tell you what to do....is there and body else there with you?

CALLER: No.

EMD: Ok, let me tell you what to do, ok?

CALLER: Yea.

EMD: Go back up to him and make sure he's laying flat on his back.

CALLER: Ok.

EMD: You want to tilt his head back.

CALLER: Ok.

EMD: Put one hand on his forehead and one hand under his neck and you want to pinch his nose and you want to blow two times in his mouth.

CALLER: Ok.

continued...

EMD: You have to blow in his mouth and you have to make a real good seal, ok?

CALLER: Ok.

EMD: ...and after you do that I want you to check for a pulse in his neck. Do you know how to check for that kind of pulse?

CALLER: You just put your fingers on his, you know...

EMD: Yea, go do that and then come back to the phone so I can give you the rest of the info.

CALLER: Ok.

<A LONG PAUSE>

CALLER: Hello?

EMD: Yea.

CALLER: If there's a pulse it's really weak.

EMD: Ok, can you feel.....

CALLER: When I did the CPR he seemed to breathe a little bit.

EMD: Ok, is he breathing at all right now?

CALLER: Uh, I'm not sure....a couple of times when I breathed down his mouth....

EMD: ...and you heard him take a.....

CALLER: I heard him take a breath.

EMD: Ok, just one?

CALLER: Well, he seems to....his face is like purple and stuff....

continued...

EMD: Ok, he definitely needs some air then. I want you to go back, blow two times in his mouth and then I want you to locate his sternum. There's a flat area in between the two nipples on his chest.

CALLER: Yes.

EMD: I want you to put your palm flat against it and I want you to push in about two and a half inches and do it 15 times.

CALLER: Breathe a couple of times then do that?

EMD: Right, do that 15 times.

CALLER: Alright, I'm going to hang up now.

EMD: Ok, breathe and just keep doing that.

CALLER: When is the ambulance going to be here?

EMD: They'll be there shortly, ok?

CALLER: Yea.

EMD: Ok, just keep doing that, two and fifteen, two and fifteen, ok?

CALLER: Ok.

NOTE: The CPR instructions given by the dispatcher and administered by the son was successful. The father recovered and was discharged from the hospital.

SCENARIO #3

BACKGROUND: This call was received at 02:12 a.m. The first reporting party was excited and spoke with slurred speech. The patient, a nineteen year old female, had a history of asthma. The patient and her friends had spent the evening drinking adult beverages at several local bars. The patient had used her inhaler several times without relief.

SCRIPT:

EMD: Paramedics.

1st CALLER: (CALLER has slurred speech, very difficult to understand.) Hi somebody here has hit his head, asthma attack.

EMD: What's the address?

1st CALLER: 1749 Reed Ave. Apt. D

EMD: How old is this person?

1st CALLER: Ohm.... 19.

EMD: Male or female?

1st CALLER: Female.

EMD: Did she use her inhaler?

1st CALLER: We tried. She's just coughing it up.

EMD: Ok, is she awake right now?

1st CALLER: Ohm...I don't know if she's conscious yet.

EMD: What?

1st CALLER: I'm not sure she's (pause) conscious yet, I'm outside.

EMD: You're outside?

continued...

1st CALLER: She's in the bedroom I'm outside. I can't hear inside right now, there's too many people yelling inside, so....

EMD: Ok, well you need to go in and find out if she's conscious, for me, breathing.

1st CALLER: I think she is, hang on, she's breathing, definitely .

EMD: Ok, just make sure she's awake for me and come back to the phone.

1st CALLER: No! No!

EMD: Pardon me?

1st CALLER: No, no get'em here now!

EMD: Well.... they're already started.

1st CALLER: She's not conscious, they're doing CPR on her now.

EMD: Sir please....

1st CALLER: I'm not....

EMD: ...you don't do CPR on someone who's awake and breathing.

1st CALLER: She's not breathing, she's not.....Lady will you listen to me?

EMD: I asked you if she was awake, you won't even go check and now you tell me......

1st CALLER: I'm not...I just checked right now. What do you want me to do?

EMD: So why are they doing CPR on her if she's breathing?

1st CALLER: She's not f___ing breathing!

EMD: Alright, you need to get the phone in there with her.... so I can talk to somebody....

continued...

1st CALLER: Right now I'm looking at them.

EMD: Who's doing CPR on her?

1st CALLER: My buddy and hissss....two people.

EMD: Do they know how to do CPR?

1st CALLER: Yes they do.

EMD: So she's not breathing at all?

1st CALLER: No.

EMD: Let me talk to one of the people doing CPR, put the phone up to their ear.

1st CALLER: Brian....they're not, they're busy...what do you want me to tell you?

EMD: I want you to put someone else on the phone.

1st CALLER: Scottie...Scottie talk to her dude.

2nd CALLER: What's up.

EMD: Hi, tell me what's going on there.

2nd CALLER: The...the this girl is unconscious right now. I have no idea what's going on.

EMD: Why is she unconscious, what's going on there?

2nd CALLER: She just got back from the bars and she drank a lot tonight and....she's really wasted.

EMD: So she's just drunk? She doesn't have asthma?

2nd CALLER: Well....I guess she does have asthma, I don't know. I have no idea.

continued...

EMD:	Ok, well who was talking to me earlier, telling me they were doing CPR?
2nd CALLER:	They are right now.
EMD:	Is she...
2nd CALLER:	She's out, not breathing.
EMD:	She's not breathing?
2nd CALLER:	No.
EMD:	Who's doing CPR? Do they know what they're doing?
2nd CALLER:	They are both in the navy.......so I assume they do.
EMD:	Ok, was there a fight or anything over there?
2nd CALLER:	Nope.
EMD:	Ok, we have help on the way.
2nd CALLER:	Ok, thanks.

NOTE: The patient was presenting extreme respiratory distress but was never in cardiac arrest. The friends of the patient were found assisting ventilation.

SCENARIO #4

BACKGROUND: The calling party was a reliable member of the family who was concerned about the deteriorating condition of her mother over the past two days. The patient was demonstrating progressive loss of motor functions.

***SCRIPT*:**

EMD: Medical emergency operator six.

CALLER: My mother has been very very ill for the last two days, I'm afraid she might have had a stroke.

EMD: What's the address there mam?

CALLER: The address is...ah....12565 North Ave, Dr. Apt. 216.

EMD: Ok, what's your phone number there?

CALLER: The phone number is 555-6165.

EMD: Ok, Almarado is the cross street at the corner?

CALLER: That is correct.

EMD: Ok, how old is this person having the stroke?

CALLER: Ah...79...she's not having a stroke, we suspect she had one Friday night and she has deteriorated sense then. We simply can't get her to the car. She's not in any life threatening situation right at the moment. We're very worried about her.

EMD: So she hasn't been to the hospital since she has had symptoms of a stroke?

CALLER: No, she has just simply deteriorated since and it's just gotten worse and worse.

continued...

EMD: Can you explain what kind of symptoms she's having right now, because I can send a private ambulance, but if she's deteriorating......?

CALLER: She can't walk, she can't get out of the chair and she really can't even hold her head up. She can breathe...

EMD: She can breathe?

CALLER: Yes.

EMD: Is she talking to you and make sense?

CALLER: Yes, she is.

EMD: Is she having any slurred speech or paralysis?

CALLER: Well.....she can't even pick up her head, where two days ago she could walk. Uh, she's extremely slow but she can be talked to. She is not in a life threatening situation at the moment but we need to get her to the hospital. We called the hospital and they said to call you.

EMD: Ok, stay on the line a second......***<PAUSE>***..... ok ma'am, I'm going to send a private ambulance and it's going to take them about twenty minutes to get there. Just keep your mom comfortable until they get there.

CALLER: Ok.

EMD: If she gets worse, starts having difficulty breathing or something like that, call 9-1-1 back and we'll tell you what to do.

CALLER: Ok, but she's not in a lift threatening condition. Now, my father is here, can he go with her?

EMD: Yes, the ambulance companies will let one of the family ride with them to the hospital.

Caller: Ok.

EMD: Ok, if anything changes, be sure and call me back at 9-1-1.

continued...

CALLER: Ok.

NOTE: The patient was found to be suffering from an exotic condition called "Normal Pressure Hydrocephalic"

SCENARIO #5

BACKGROUND: No information provided.

SCRIPT:

EMD: 9-1-1 medical emergency operator 52.

CALLER: Hi, I'm calling from my cell phone and there's a wreck at 2nd and Main St. a taxi broadside a car....

EMD: What is your phone number?

CALLER: 555-7731

EMD: Is anyone hurt?

CALLER: I think so...I'm not sure....yes, the passenger in the car is bleeding. Please send someone and hurry.

EMD: I've already dispatched help to your location. How many people are involved?

CALLER: The taxi has two passengers and there are two people in the car.

EMD: So is that a total of five?

CALLER: Yes, that's right, five including the taxi driver.

EMD: Is anyone trapped in the vehicle?

CALLER: I'm not sure....I don't think the passenger in the car can get out....

EMD: Ok, are you going to go over to the scene?

CALLER: I can if you want me to.

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**National Highway
Traffic Safety
Administration**

Emergency Medical Dispatch

Trainee Guide

U.S. Department of Health & Human Services
Public Health Service
HRSA
Health Resources & Services Administration
Maternal & Child Health Bureau

NHTSA
People Saving People

National Highway Traffic Safety Administration

Emergency Medical Dispatch: National Standard Curriculum

TRAINEE GUIDE

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PURPOSE

This Trainee Guide is intended to be used as a learning tool for the National Highway Traffic Safety Administration Emergency Medical Dispatch National Standard Curriculum. The purpose of this training course is to provide trainees with the knowledge and skills necessary to perform their jobs at their local agency.

The Trainee Guide has been developed with the needs of the beginning Emergency Medical Dispatcher (EMD) in mind. It allows you to follow the instructor's presentation format during the EMD training course. You may also refer to the Trainee Guide after attending the course. This Trainee Guide is not intended to serve as a user manual, but to be used as a guide to the EMD training course participants.

This Trainee Guide establishes the NHTSA standard curriculum for EMD. It represents the required content of any EMD curriculum.

COURSE GOALS

The overall goal of the NHTSA EMD Course is to:

- Ensure that all users possess the baseline knowledge, skills and abilities to successfully function in the role of EMD call-taker or dispatcher.

COURSE STRUCTURE

This EMD Course is a 24-hour minimum course designed to elevate trained and experienced public safety telecommunicators to effectively direct and manage their emergency medical resources. This course primarily focuses on end user productivity in obtaining information from callers, selecting the proper protocol, dispatching proper resources and giving telephone medical instructions. Other areas of significance are the basic philosophy of EMD, legal concepts important to the EMD's job and basic medical concepts necessary for understanding the medical content of emergency medical dispatch.

EMERGENCY MEDICAL DISPATCH NATIONAL STANDARD CURRICULUM

Trainee Guide Introduction

This course will provide EMD trainees with the skills and knowledge necessary to effectively dispatch resources for medical emergencies. The course is broken down into individual topics called modules. Each module is further sequenced into units. The modules and units were developed based on the behavioral learning objectives established. These behaviors represent the required behaviors of effective EMD personnel. The course is organized into four modules, to be taught sequentially in the order listed below:

Module 1:	Basic Emergency Medical Dispatch Concepts
Module 2:	Information Gathering and Dispatch
Module 3:	Introduction to the EMDPRS and 32 Chief Complaint Types
Module 4:	Practical Examination Overview

The information contained in the above modules will be taught using instructor presentations, demonstrations and practical exercises designed to reinforce classroom learning. Exercises will typically begin with an instructor-led example, followed by a more difficult exercise with instructor assistance available when necessary, and concluding with unassisted (but instructor-supported) exercise(s). The course will end with a comprehensive, hands-on exercise encompassing all that was learned in the course.

MODULE 1
Basic Emergency Medical Dispatch Concepts

MODULE OVERVIEW

Successful Emergency Medical Dispatch requires a complex combination of skills and knowledge. These skills, along with the knowledge required to develop them, are used daily to save the lives of people across this country.

Module 1, Basic Emergency Medical Dispatch Concepts, introduces the basic concepts behind developing good emergency medical dispatch skills. It forms the basis for the rest of the course. As you progress through the module, you will learn and understand the roles and responsibilities you will have as an Emergency Medical Dispatcher (EMD).

This module presents the basic philosophy of emergency medical dispatch, including the roles and responsibilities of the EMD. It also presents basic information about legal and liability issues the EMDs face, as well as basic emergency medical concepts that you, as an EMD trainee, need to know to more effectively perform your duties.

Module 1 contains the following Units:

Unit 1:	*Introduction to the EMD Roles and Responsibilities*
Unit 2:	*Legal and Liability Issues in Emergency Medical Dispatch*
Unit 3:	*Introduction to Emergency Medical Concepts*

MODULE OBJECTIVES

BEST COPY AVAILABLE

Upon completion of this module, you will be able to:

1. Describe the functions, roles and responsibilities of an effective EMD.
2. Identify legal and liability issues that the EMD faces.
3. Identify strategies to avoid litigation.
4. Describe medical concepts as they relate to the EMD function.

Module 1 - Unit 1
Introduction to the EMD Roles and Responsibilities

UNIT OVERVIEW

The roles and responsibilities of the Emergency Medical Dispatcher (EMD) vary, in some respects, by locale. However, there are some functions and characteristics common to all EMDs.

Unit 1, Introduction to the Emergency Medical Dispatcher Roles and Responsibilities, introduces you to the basic concepts of Emergency Medical Dispatch. It provides you with information relating to the functions of the EMD and what it takes to be an effective EMD. Unit 1 also outlines the basic roles and responsibilities of the EMD and provides information about the three phases of the dispatch function. This unit forms the basis for the remainder of the course. Successful completion of this unit, therefore, is required to successfully complete the rest of the course.

UNIT OBJECTIVES

Unit Learning Objective

Upon completion of this unit, you will be able to:

1. Describe the functions, roles and responsibilities of an effective EMD.

   Enabling Learning Objectives

   To meet the unit learning objective, you will:

   1.1 List/explain the five functions of the EMD.

   1.2 List the basic prerequisites to being a successful dispatcher.

   1.3 Identify roles and responsibilities of the EMD.

   1.4 List/explain the three phases of the dispatch function.

   1.5 Describe the local Emergency Medical Service (EMS) system.

ABOUT THE COURSE

Emergency Medical Dispatch involves the combination of telecommunication skills and medical knowledge. An Emergency Medical Dispatcher (EMD) must successfully master this body of skills and knowledge in order to be most effective in serving the public emergency medical needs as part of the local EMS system.

The National Highway Traffic Safety Administration's *Emergency Medical Dispatch: National Standard Curriculum* is designed to provide this skill and knowledge. The course is an advanced public safety dispatch course, with its main emphasis on the medical side of emergency dispatching. This course does *not* focus on the telecommunications aspect of an EMD's job.

NOTE: This curriculum is designed for use when developing a locally relevant curriculum. It is not to be accepted as THE curriculum for any locale without first being reviewed, modified (as needed or required) and officially authorized by the local medical authority.

NOTE: Throughout this document you will see the acronym EMD. This acronym has two meanings. EMD can mean "Emergency Medical Dispatcher" or "Emergency Medical Dispatch," depending on the context in which is used.

The National Highway Traffic Safety Administration's *Emergency Medical Dispatch: National Standard Curriculum* is designed to provide enough material to ensure you will be able to:

1. State and identify the roles and responsibilities of an Emergency Medical Dispatcher;
2. Obtain sufficient and accurate information from callers to dispatch resources properly and efficiently;
3. Allocate resources properly and according to local medically approved protocols;
4. Recognize the need for and be able to recall EMS resources as appropriate and necessary;
5. Give appropriate initial emergency medical care instructions to callers as locally approved medical interrogation protocols indicate and
6. Understand the medical information found in locally approved Emergency Medical Dispatch Protocol Reference Systems (EMDPRSs).

Icons You Should Know

☛

The following table shows icons you will see in the left column of this course. Each icon in the left column means something different. The meaning of each icon is:

☛	The hand icon tells you that you are reading something important. When you see this icon you should read carefully because you might see the information again in an exercise or exam.
✎	The pencil icon tells you that the instructor will probably elaborate at this point. You should take notes here because you may see the information again, in an exercise or exam.
?	When you see the question-mark icon, you have the chance to ask questions, or you may be given a question that you should be prepared to answer.

Table 1-1, Icon Legend

Background Information/History

First, the EMD is the primary and initial point of contact for callers seeking some sort of medical assistance. Second the EMD serves as a vital communication link between and among other parts of the Emergency Medical Service system.

Also, the EMD helps callers administer initial emergency medical care to patients who need assistance. In this respect, EMDs assist callers in saving the lives of patients in whose behalf they call.

?

QUESTION: *Why would* ***you*** *consider yourself an essential part of your EMS system?*

Introduction to Emergency Medical Dispatch

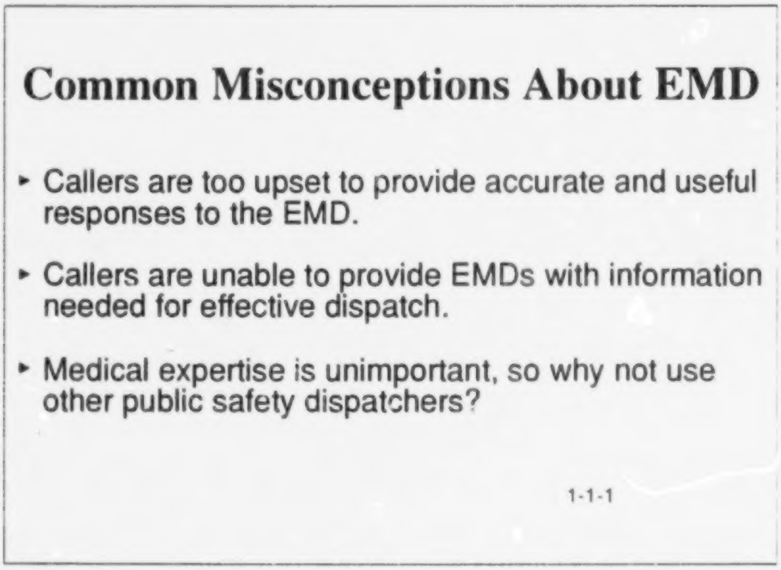
Common Misconceptions About EMD. Despite the obvious need for EMDs, there are many misconceptions about Emergency Medical Dispatch and EMDs. Some of these misconceptions are listed below.

1. *Callers are too upset to provide accurate and useful responses to the EMD.* Experience indicates that using the question sequences provided by the EMDPRS will allow you to elicit information necessary for effective dispatch.

2. *Callers would not be able to provide the EMD with required information that is necessary to effectively dispatch emergency medical resources.* The EMDPRS protocols are designed so that you can get the proper medical information you need for effective dispatch.

3. *The medical expertise required for effective emergency medical dispatch is not important, therefore public safety officials should use non-EMD dispatchers to dispatch resources.* One of your most important jobs is to give out medical instructions when told to do so by the EMDPRS.

   EMDs are advanced telecommunicators. You will receive specific emergency medical dispatch training and be taught to use your EMDPRS to decide which resources to dispatch.



Common Misconceptions About EMD

- Callers are too upset to provide accurate and useful responses to the EMD.
- Callers are unable to provide EMDs with information needed for effective dispatch.
- Medical expertise is unimportant, so why not use other public safety dispatchers?

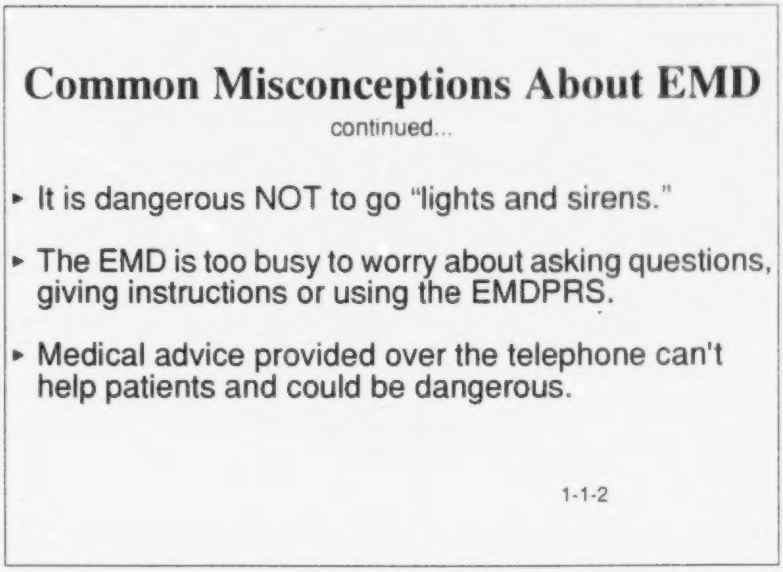
1-1-1

4. *All EMS calls must be answered "lights and sirens."* In most cases, this is unnecessary. Most calls are not life-threatening. Use of an all-out response can be dangerous for both responders and bystanders. Refer to your locally approved EMDPRS for the appropriate responses available to you.

5. *The EMD is too busy dispatching to worry about asking all those questions, to provide instructions or use their protocol cards (EMDPRS).* This is your job! In this case, effectiveness is the key concern. You are trained to use the EMDPRS, which contains questions designed to get you the information you need for effective dispatch.

6. *Medical advice (provided over the phone) cannot help patients and could actually be dangerous.* You are trained to use the EMDPRS. The EMDPRS is approved by a local medical authority whose job it is to see that the EMDPRS your office uses is NOT going to hurt anyone.

7. *Using the EMDPRS increases the amount of time and resources required to process a call.* Experience has shown that the time required to process a call increases very little in systems using the EMDPRS, when compared to systems that do not use them. In some cases, the response time even decreases.



Common Misconceptions About EMD

continued...

- It is dangerous NOT to go "lights and sirens."
- The EMD is too busy to worry about asking questions, giving instructions or using the EMDPRS.
- Medical advice provided over the telephone can't help patients and could be dangerous.

1-1-2

These myths are common. This course gives information to help you dispel these myths. Remember, the purpose of this course is to give you the skills and knowledge required to do your job.

?

QUESTION: *What are five of the most common myths about EMDs? Why are they wrong?*

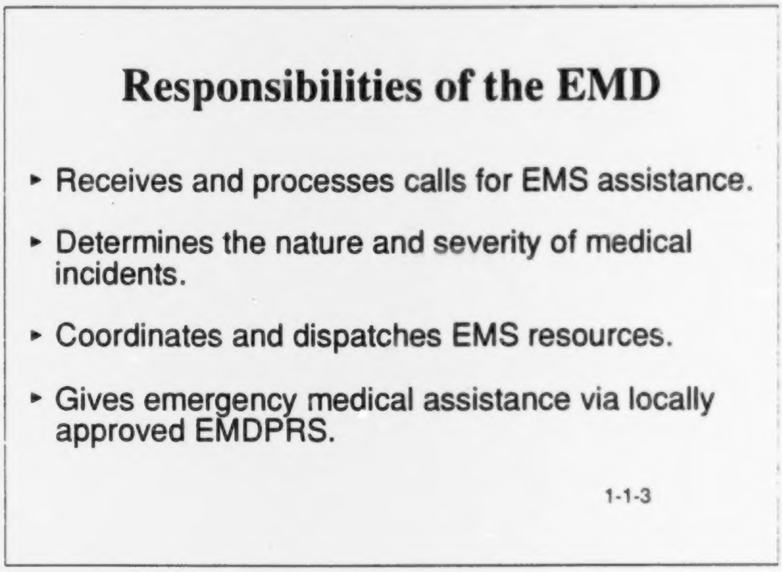
Responsibilities of the EMD. As an emergency medical dispatcher, you play a vitally important role in the EMS system. Some of your responsibilities are obvious, others are not so obvious. Your responsibilities as an EMD are discussed in the following paragraphs.

An EMD serves to receive and process calls for Emergency Medical Service assistance. Because of this, you must receive training in the use and handling of telecommunications equipment. This course does NOT provide that training.

An EMD must determine the nature and severity of the medical incident type. You decide what is wrong, using the EMDPRS. It tells you what type of response you should make, including what types of units to send and what instructions you can give to callers.

An EMD is responsible for the coordination and dispatch of EMS resources. You coordinate and dispatch resources based on the pre-determined response configurations found in the local medically approved EMDPRS. You must know the availability of all resources in your system.

The EMD provides emergency medical assistance using the local medically approved EMDPRS. You may have to provide callers with emergency medical instructions. The EMDPRS will tell when you need to do this. Remember, most calls are not life threatening. The information you give will mostly be used to make the patient more comfortable and ensure their health and safety until dispatched medical personnel arrive.



Responsibilities of the EMD

- Receives and processes calls for EMS assistance.
- Determines the nature and severity of medical incidents.
- Coordinates and dispatches EMS resources.
- Gives emergency medical assistance via locally approved EMDPRS.

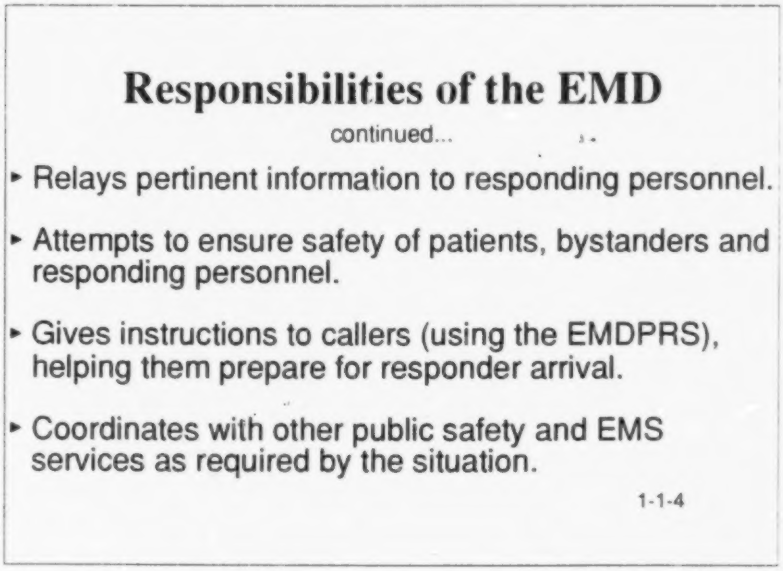
1-1-3

An EMD relays pertinent information to responding personnel. Another responsibility of yours is to relay information about the patient to the responding unit(s). This usually includes information about the patient's location and current status.

The EMD attempts to ensure the safety of the patient, bystanders and responders. You are required to attempt to ensure the safety of patients, bystanders and responders by warning them to remove patients from any immediate danger of further injury if possible. The EMDPRS tells you when to do this.

An EMD provides instructions to callers that will help them prepare for the arrival of responders, based on the instruction of the EMDPRS. Your EMDPRS provides information that you can relay to callers prior to the arrival of dispatched personnel. This information makes the work of the responders easier. It includes things like locking up dogs and unlocking doors.

The EMD coordinates with other public safety and emergency medical services as required by the situation. Based on the situation at hand, it may be necessary for you to contact other public services (like HAZMAT, Air Ambulance, etc.). Usually, air ambulance requests are issued to you by the responder at the scene. It is up to you to know and refer to your local procedures for contacting air ambulance services.



Responsibilities of the EMD

continued...

- Relays pertinent information to responding personnel.
- Attempts to ensure safety of patients, bystanders and responding personnel.
- Gives instructions to callers (using the EMDPRS), helping them prepare for responder arrival.
- Coordinates with other public safety and EMS services as required by the situation.

1-1-4

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QUESTION: *What are your responsibilities as an EMD?*

Attributes/Behaviors of the Successful EMD. Knowing the responsibilities of an EMD is simply not enough to be successful at it. There are certain attributes and/or behaviors of EMDs that separate the successful EMD from the rest.

The successful EMD is helpful and compassionate. Dispatchers who train to be EMDs do so for various reasons. Compassion for others and the desire to help them are two of the most important characteristics of a good EMD. EMDs show compassion for their callers and treat them with respect.

A successful EMD effectively handles the emotional stress involved in caller/patient crisis situations and clearly guides callers in these situations. Callers, patients and even you will likely be in high states of anxiety. It is up to you to calm them and yourself, gather information necessary for proper dispatch and provide callers with instructions (medical or "pre-arrival") that help in giving aid and comfort to the patient.

The successful EMD masters the skills, philosophy and knowledge of Emergency Medical Dispatch. To be successful, you must learn and master the skills required for effective emergency medical dispatch. These skills can be taught through courses and practice.

A successful EMD effectively gathers information from callers, prioritizes that information and consolidates that information in a useful format. It is essential that you be able to do all of this. Although most calls you will receive are not life-threatening (as stated earlier), there are instances where time is a critical factor in the survival of the patient. You should practice getting information in order to facilitate the dispatch process.

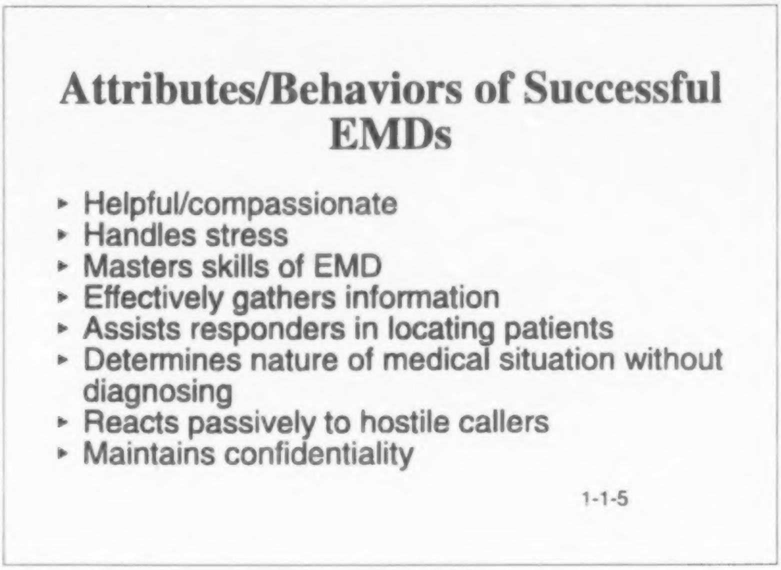
A successful EMD assists other EMS personnel in reaching the patient's location. Without location information given by you, dispatched personnel could not find the patient.

The successful EMD determines the nature of the medical emergency without diagnosing the medical problem or condition. Your job is to determine the medical emergency and dispatch personnel to deal with it.

Successful EMDs assist EMS personnel on the scene as requested by EMS personnel and avoid making patient care decisions by long distance. Once you have dispatched EMS personnel, you are to provide the pre-arrival and/or medical instructions to the caller as indicated by the EMDPRS. Once they arrive on the scene you are to assist responders by doing what they ask you to do.

A successful EMD reacts passively to hostile callers, making no judgments based on the caller's demeanor or past experience with the caller. As an EMD, you are expected to dispatch based on the information you gather from a caller in response to the questions you ask (from the EMDPRS). Caller demeanor can be deceptive. What may sound like an inebriated caller (slurred speech, slow or "wandering" response to your questioning) could be a caller suffering a stroke or a diabetic with low blood sugar.

A successful EMD maintains confidentiality. Under no circumstance are you allowed to give out information about a patient or caller. This includes knowledge of HIV infection. **Check with your local legal counsel about local HIV regulations. If you are provided with the information, ask the caller to inform the responding personnel upon their arrival at the scene.** If someone calls and requests information about a patient's status or name, you are only allowed to tell them where the ambulance is taking a patient.



Attributes/Behaviors of Successful EMDs

- Helpful/compassionate
- Handles stress
- Masters skills of EMD
- Effectively gathers information
- Assists responders in locating patients
- Determines nature of medical situation without diagnosing
- Reacts passively to hostile callers
- Maintains confidentiality

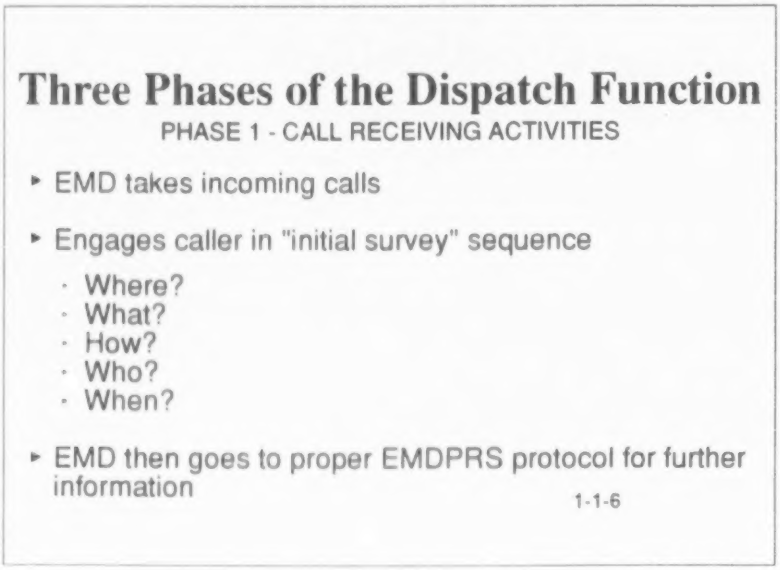
1-1-5

?

QUESTION: *How would you describe a successful EMD? What characteristics should one have? What kinds of things would a successful EMD do or not do?*

Three Phases of the Dispatch Function. Knowing your basic responsibilities, and what it takes to be a successful EMD is not enough. As you may or may not know, there are three major phases of the dispatching function.

Phase 1 - Call Receiving Activities. In this phase, an EMD takes an incoming call and goes through an "all-caller interrogation" sequence. This sequence essentially allows the EMD to determine the location of the patient (**WHERE?**), the nature of the medical emergency (**WHAT?**), how it occurred (**HOW?**), to whom it occurred (**WHO?**) and when it occurred (**WHEN?**). Based on the information received, the EMD can immediately go to the proper protocol located in the EMDPRS and continue on to the next dispatch phase.



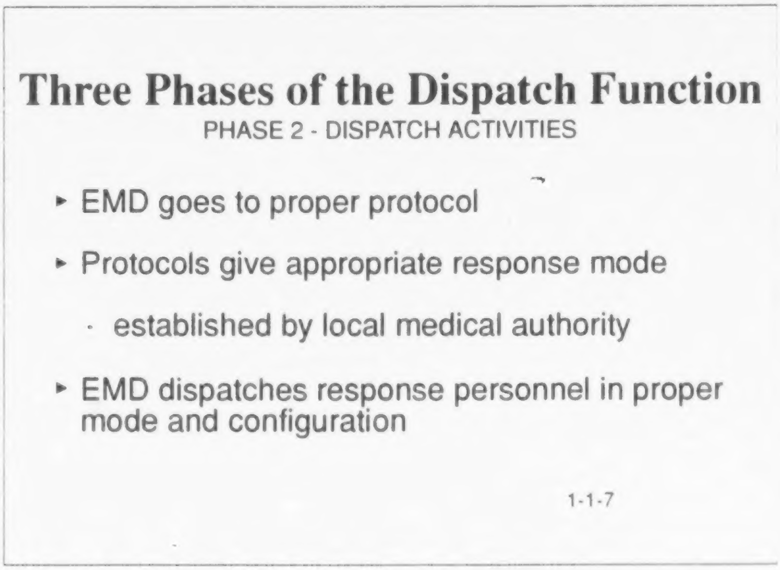
Three Phases of the Dispatch Function

PHASE 1 - CALL RECEIVING ACTIVITIES

- EMD takes incoming calls
- Engages caller in "initial survey" sequence
  - Where?
  - What?
  - How?
  - Who?
  - When?
- EMD then goes to proper EMDPRS protocol for further information

1-1-6

Phase 2 - Dispatch Activities. Questioning continues in this phase, and based on the information gathered during the call receiving phase, the EMD turns to the proper protocol. This protocol provides the proper response mode. Response modes are pre-determined by local medical authorities for the most effective response to the call type. The EMD dispatches EMS personnel to the scene in the proper, pre-determined mode and configuration .



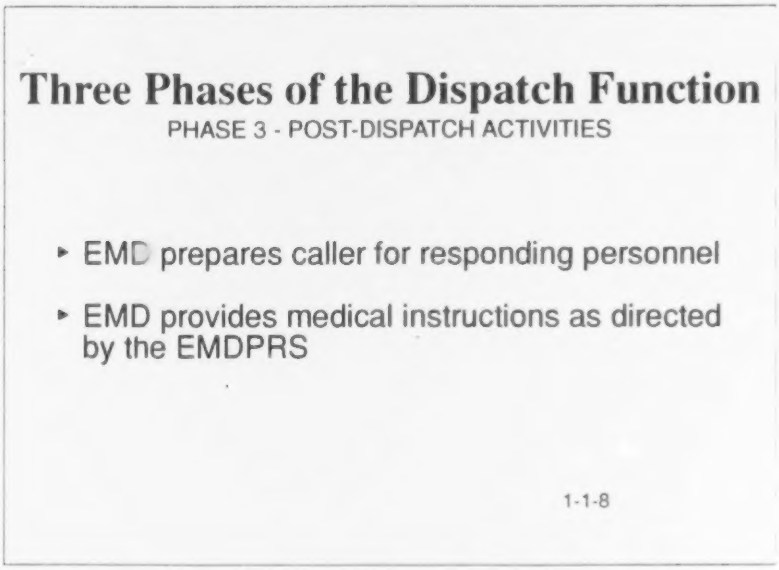
Three Phases of the Dispatch Function

PHASE 2 - DISPATCH ACTIVITIES

- EMD goes to proper protocol
- Protocols give appropriate response mode
  - established by local medical authority
- EMD dispatches response personnel in proper mode and configuration

1-1-7

Phase 3 - Post-Dispatch Activities. Once resources have been dispatched, the EMD engages in preparing the caller/patient for the arrival of responding EMS personnel. The EMD also updates responding personnel with additional information as it is received. This could involve giving the caller pre-arrival instructions like unlocking doors, locking up dogs, turning on lights, gathering patient medications as indicated in the EMDPRS, etc. It may also involve the provision of medical instructions as indicated by the EMDPRS.



Three Phases of the Dispatch Function

PHASE 3 - POST-DISPATCH ACTIVITIES

- EMD prepares caller for responding personnel
- EMD provides medical instructions as directed by the EMDPRS

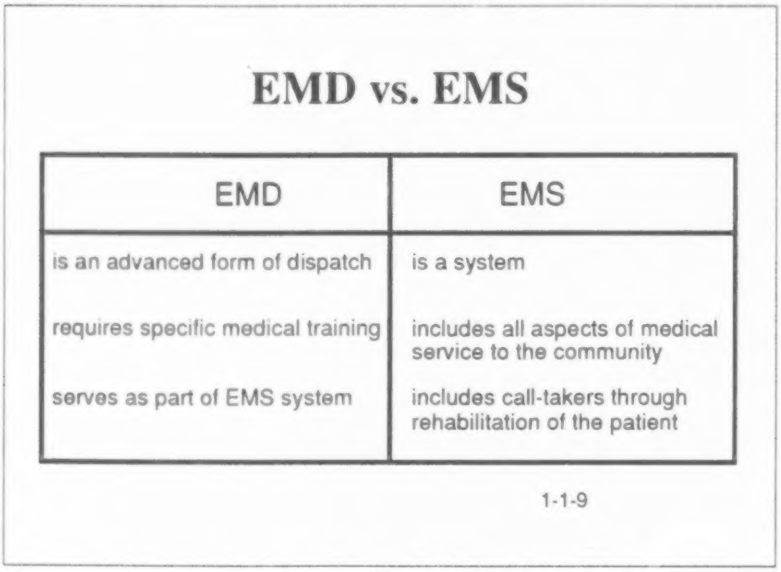
1-1-8

The Emergency Medical Service (EMS) System. Where does the EMD fit into the scheme of the EMS system? The answer to this question varies by locale. Your system may be very different than the EMD in the next county, city or suburb. In addition to the responsibilities you have already learned, there is one more: *It is the responsibility of the EMD to fully understand the EMS system in which s/he works.*

EMD vs EMS. What's the difference? *Emergency Medical Dispatch (EMD)* is an advanced form of dispatch telecommunications based on specific medical training. This training makes the EMD a member of the medical community, and therefore carries responsibilities in addition to those present in basic dispatch telecommunication. An EMD serves as a *part* of the local emergency medical service system.

Emergency Medical Service (EMS) includes all personnel of the local public safety system with specific, specialized medical training. An EMS system is defined as a coordinated arrangement of resources (including personnel, equipment and facilities) organized to respond to medical emergencies regardless of the cause. An EMS system covers the spectrum from prevention (changing behavior to prevent injuries from occurring) through rehabilitation (returning individuals to productive lives after an injury producing incident has occurred).

The EMS system is a complex arrangement of components including: statewide legislation; system management; human resources and training; communications; transportation; public information and education; facilities; trauma systems; medical direction and evaluation, all designed to serve the needs of the public in medical emergencies. All the links in the chain of events must be present to complete the EMS system.



EMD vs. EMS

EMD	EMS
is an advanced form of dispatch	is a system
requires specific medical training	includes all aspects of medical service to the community
serves as part of EMS system	includes call-takers through rehabilitation of the patient

1-1-9

Resources commonly found in an EMS system. As indicated earlier, each EMS system is different. All members of the EMS system interact differently in one locale and may or may not even exist in another. In general, however, EMS systems contain the following resources;

1. **Basic Life Support (BLS)/Advanced Life Support (ALS)**

   Generally, there are multiple types of responding resources available in many EMS systems. They are defined at the state or local level. These resources vary in the types of equipment carried, patient transport capability, treatments that can be provided and the training that the attending personnel have received. These include First Responders, BLS and ALS, defined on the following page.

2. **Fire**

   Fire personnel often are part of the local EMS system because they have received specialized medical training. As such, they often are used as resources for emergency medical services.

3. **Police**

   Police officers are also part of many EMS systems. They may receive basic first aid training and also are frequently used to assist responding personnel in reaching patients and providing scene safety.

4. **Hospitals/Emergency Care Facilities**

Hospital emergency departments and other emergency care facilities also are included in most EMS systems. Frequently these resources are contacted by the EMD at the request of EMS personnel at the scene. They may be contacted to get specific medical information that the responders might need.

5. **Other**

There are other resources available in many EMS systems. These include hazardous materials units (aka "HAZMAT"), Sexual Assault Centers, Hyperbaric Centers, Trauma Centers, Poison Control Centers, Burn Centers, Language Translator Services, etc.

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QUESTION: *Can you name resources commonly found in EMS systems? Think about EMS resources that are available in your EMS system. What are they?*

Tiered EMS System Structures. There are as many EMS system structures as there are places that have EMS systems. These systems usually are broken down into layers or "tiers." Each tier has a different level of response based on local EMS system design. In general there are four tier types. *Not all systems have all of these tiers.*

1. **Tier 1.** *First Responders* are used to provide immediate response to events that are determined to be highly urgent. The personnel are often trained in basic life support.

   Due to the availability and proximity of these units, they are able to provide quick response and early access to the patients while the ambulance is enroute to the scene. They are able to provide immediate treatment or stabilization of the patient.

2. **Tier 2.** *Basic Life Support* (BLS) EMS units are usually transport ambulances staffed by emergency medical technicians (EMTs). These personnel have at least 110 hours of training in patient assessment and treatment of fractures, lacerations and other minor injuries. They are also CPR trained and are able to provide appropriate care to patients.

   EMTs provide treatment and transport of the sick and injured in cases where more advanced treatments and interventions are not required. They also may be used to assist or back up more advanced level EMS responders.

3. **Tier 3.** *Advanced Life Support* (ALS) units are usually staffed by paramedics who have at least 600 hours of coursework and advanced training in the care and treatment of the sick and injured.

   There are several levels of ALS. Currently, paramedics are the highest level. All levels of advanced life-support function under medical control and have a physician medical advisor responsible for the medical content of the program.

   Other ALS levels include EMT-D (for Defibrillator) and EMT-I (for Intermediate). These individuals, while not as highly trained as paramedics, are trained in defibrillation, breathing support methods (like endotracheal intubation) and are also trained in establishing intravenous lines for delivery of fluids.

ALS personnel trained to the paramedic level can perform all functions of basic life support personnel. They also have specialized training in advanced cardiac life support, EKG interpretation and are certified to establish intravenous lines, administer specific cardiac medication along with many other therapeutic medicines under the direction of medical control. They are trained in advanced airway maintenance techniques such as endotrachial intubation and have additional training in anatomy and physiology.

4. **Tier 4.** *Air Ambulance/Aeromedical Services* Many EMS systems have air ambulance support available if needed. These are usually hospital based ALS helicopter services staffed by paramedics and nurses.

   These resources are used in the most severe cases where transport time to the hospital may be the determining factor in patient survival. They are also utilized in remote areas where EMS ground transport units have difficult access.

Response Modes. As with tiers, response modes vary from place to place. *In general,* they fit into two categories;

1. *"Cold" responses;* no lights or sirens and no special emergency vehicle rules apply; responders are part of the normal traffic flow.

2. *"Hot" responses;* Emergency vehicle traffic laws apply; the responding vehicle uses its lights and sirens and may be permitted to exceed the legal speed limit in order to reach the patient in the quickest possible time.

NOTE: Your agency may have different labels for these terms. If the instructor does not review these terms with you, feel free to ask him or her about them.

Summary

This unit introduced you to the basic roles and responsibilities of EMDs. It also introduced you to basic structures (tiers), resources and responses found in most EMS systems. Finally, you were introduced to the structure, resources and responses used in your EMS system.

In the next unit you will learn about the legal environment in which you work. **Unit 2, Legal and Liability Issues in Emergency Medical Dispatch** provides information about legal concepts that you should know.

MODULE 1 - UNIT 2

Legal and Liability Issues in Emergency Medical Dispatch

UNIT OVERVIEW

Emergency Medical Dispatchers work under difficult conditions. The stress associated with the job comes from the nature of the calls and concern over legal issues that can arise from doing your job.

Unit 2, Legal and Liability Issues in Emergency Medical Dispatch gives you the legal information on your responsibilities and identifies areas of risk. You will be given some legal terminology with which you should become familiar. Then the unit gives you information on how to avoid legal problems.

UNIT OBJECTIVES

Unit Learning Objectives

Upon completion of this unit, you will be able to:

2. Identify legal and liability issues that the EMD faces.
3. Identify strategies to avoid litigation.

Enabling Learning Objectives

To meet the unit learning objectives, you will:

2.1 Define liability.

2.2 Describe liability exemptions and dispatcher immunity.

2.3 Describe negligence and how courts determine negligence.

2.4 Define standard of care.

2.5 Describe abandonment.

2.6 Describe the two types of consent.

2.7 Explain and identify issues that surround confidentiality.

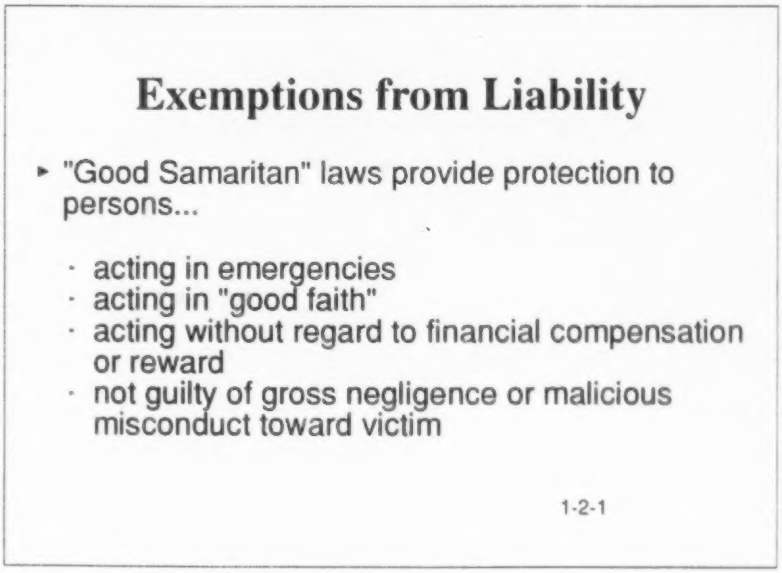
3.1 Explain litigation and how to avoid it.

BASIC LEGAL CONCEPTS

As an EMD, you deal daily with life and death situations. The last thing you should have to deal with is legal issues. In order for you to better learn the best ways to deal with legal concerns, you must learn about the most common legal concepts.

Liability

Definition. Liability means that you are ultimately responsible for your actions. Liability is related to negligence, because after negligence is proven in court, liability is assigned to an individual. You and/or your agency can be held liable for damages that may occur as a direct result of negligent actions, practices or conduct.



Exemptions from Liability

- "Good Samaritan" laws provide protection to persons...
  - acting in emergencies
  - acting in "good faith"
  - acting without regard to financial compensation or reward
  - not guilty of gross negligence or malicious misconduct toward victim

1-2-1

Negligence

Definition. Negligence is defined as "failure to act or perform in a particular situation as any other reasonable, prudent dispatcher (with the same or similar training) would under the same or similar circumstances."

In most cases the person who files a lawsuit ("plaintiff") is seeking compensation ("damages") for damage ("injury") that they allege occurred. Provided that you follow the locally approved EMDPRS and standards, the risk of negligence is significantly decreased.

Proving Negligence. "Intent to Harm" is not required to prove negligence. The best way to understand negligence is to learn how it is determined in court. To prove negligence, the court must determine 4 things:

1) **Duty**. *Duty is the responsibility to act or perform according to established standards of care.* The court must show that some "duty to act" existed in the situation. The "duty relationship" begins when the EMD answers a call.

2) **Breach of Duty**. To prove negligence, the court must show that there was a breach of duty. That is, that you did not perform your duty (by acting according to the standard of care established by the community).

3) **Injury/Damage**. To prove negligence, the court must also prove that damage or injury was done to the patient. The type and amount of injury determines the amount of "damages" awarded to the victim.

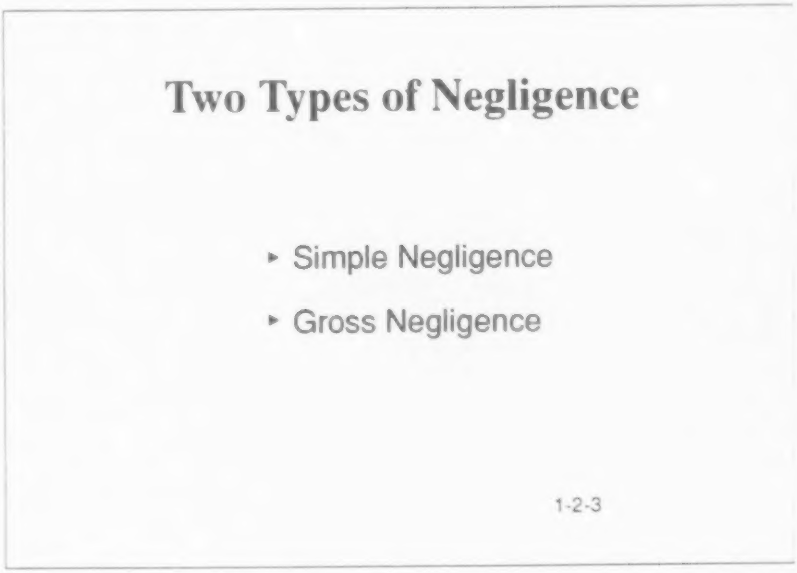
4) **Proximate Cause/Causation**. The fourth criteria used to determine negligence is some determination of "causation." This means that the court has to show there is a direct relationship between the action taken by the EMD and the injury to the patient.

Proving Negligence

Court Looks for 4 Things...

- Duty
- Breach of Duty
- Injury/Damage
- Proximate Cause/Causation

Two Types of Negligence. There are two types of negligence you will hear about, Simple and Gross. **Simple negligence** is defined as negligent conduct that was not purposeful or due to "malicious intent" (you didn't mean to do it). **Gross negligence** is defined as a negligent action that was undertaken with malicious intent (you meant to cause harm) and with willful disregard for the safety of persons and/or property.



Two Types of Negligence

- Simple Negligence
- Gross Negligence

1-2-3

Standard of Care

Defined. The standard of care for an area can be defined at any level of government; Local, State or Federal. Usually, the standard used in a court case is the standard used by the local community.

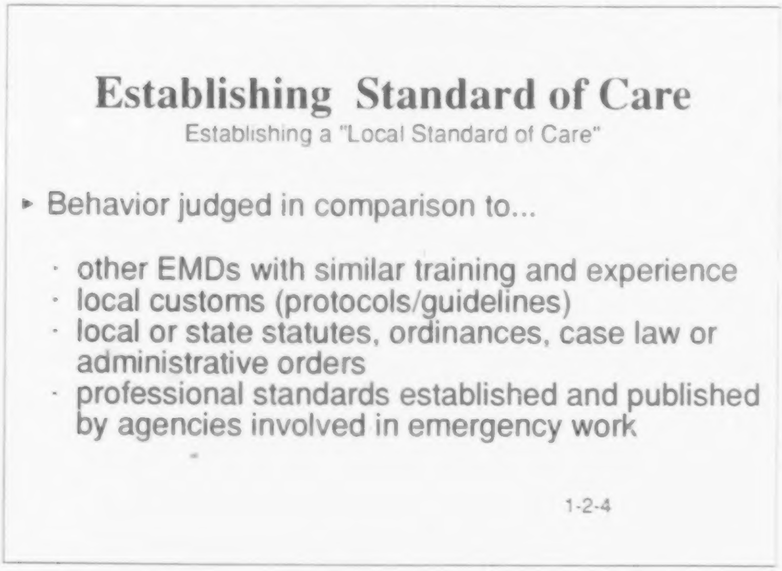
Establishing Standard of Care. The court generally uses four measures of conduct to determine the local "standard of care." These four measures are:

1) The EMD's behavior and conduct is judged in comparison to others with similar training and experience;

2) The EMD's behavior and conduct is judged in comparison to locally approved protocols and guidelines;

3) The EMD's behavior and conduct is judged in comparison to local or state statutes, local ordinances, case law or administrative orders that address the standard of care and

4) The EMD's behavior and conduct is judged in comparison to professional standards published by organizations involved in the development of emergency medical service standards such as the National Academy of Emergency Medical Service Physicians (NAEMSP) and the American Society for Testing and Materials (ASTM).



Establishing Standard of Care

Establishing a "Local Standard of Care"

- Behavior judged in comparison to...
  - other EMDs with similar training and experience
  - local customs (protocols/guidelines)
  - local or state statutes, ordinances, case law or administrative orders
  - professional standards established and published by agencies involved in emergency work

1-2-4

Other Legal Terms You Should Know

Abandonment. Simply put, abandonment is when you leave a patient who is known to be in a life-threatening condition. This includes **starting** treatment and then letting someone with less training take over resulting in being further injury or decline in the patient's condition.

Principle of Reasonableness. This refers to what a "reasonable person" would do when faced with the same or similar situation.

Emergency Rule. The Emergency Rule states that "one who is faced with an emergency cannot be held to the same standard of conduct that he/she would otherwise be held to when not faced with such a situation." Simply put, when you face an emergency you can't be expected to act the same as you would if the emergency situation was not there. It is based on the "principle of reasonableness."

Foreseeability. "Foreseeability" refers to the fact that you must rely solely on the information you get from callers (you can't actually see what is happening at the scene). If on-scene findings (by the resources you dispatch) are different (more serious) than those reported by the caller then you are not liable, *provided you followed the local EMDPRS for the reported chief complaint type.* Like the Emergency Rule, it is also based on the "principle of reasonableness."

Detrimental Reliance. A person expects that a certain action will be taken based on the fact that it has been reported in the media ("it was done before for other people"), public education or through simple reasonable expectation. If this action does not occur then the person can claim that they "relied" on the system to act in a certain way, and by doing so it ended up hurting them.

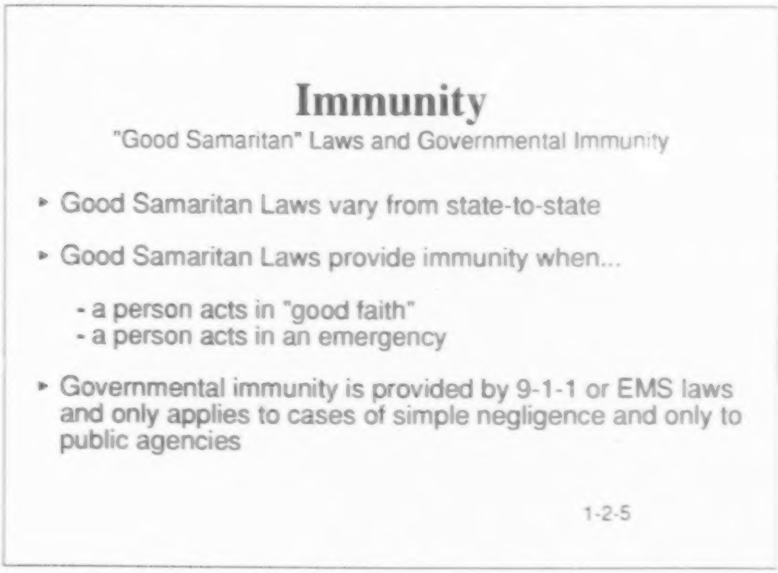
Damages. Anything awarded to winning plaintiffs. In negligence lawsuits, damages can be both "compensatory" and "punitive." *Compensatory damages* are those that involve repaying plaintiffs for money they have lost (lost wages due to lost workdays, hospital/medical bills, etc.). *Punitive damages* are those used to punish a defendant.

Consent. Consent refers to permission to treat the sick or injured. You will usually hear about 2 types, Implied and Actual. ***Implied Consent*** refers to situations where if patients are unconscious and can't respond, it is safe for us to assume that they would want to be helped. ***Actual Consent*** is direct verbal or non-verbal communication to someone giving aid.

Immunity. Many states have "Good Samaritan" laws. *Ask your instructor about this.*

NOTE: **Good Samaritan Laws do not apply to you while on the job.** There may be local or state laws that protect you, but the "Good Samaritan Laws" don't apply under any circumstance.

Governmental immunity is found in some cities and states. This immunity comes from 9-1-1 or EMS laws and usually applies only in cases of "simple negligence" where there was no "malicious intent." These laws do not apply to EMDs in private agencies.



Immunity

"Good Samaritan" Laws and Governmental Immunity

- Good Samaritan Laws vary from state-to-state
- Good Samaritan Laws provide immunity when...

  - a person acts in "good faith"
  - a person acts in an emergency

- Governmental immunity is provided by 9-1-1 or EMS laws and only applies to cases of simple negligence and only to public agencies

1-2-5

Patient Confidentiality

Issues in confidentiality. You are expected to maintain confidentiality. Patients have the right to expect that any information they give you will be kept confidential. In terms of confidentiality, you:

1) can't relate information about patient names;
2) can't talk about what ***the patient*** said;
3) can't talk about unusual behaviors that are not related to the medical condition unless danger exists (to responders) and
4) can't talk about aspects of a patient's lifestyle.

Only information that is relevant to determine the proper medical response, related to scene safety, patient complaint and condition can be relayed.

NOTE: Ask your instructor to discuss local HIV policies.

Inappropriate Concerns and Misconceptions

More misconceptions and concerns. Some misconceptions that are common to EMD were addressed in Unit 1. In addition to those are the following. These concerns and misconceptions are those that EMDs and the public have. Throughout your training you will see why they are wrong:

1) *EMDs should be certified as CPR instructors.* ASTM standards do not require that EMDs be certified as CPR instructors. Because you work in an environment where you are unable to see the patient for yourself (a "blind environment"), CPR certification is not as vital as being able to tell a caller how to do it via telephone instructions using the approved EMDPRS protocols.

2) *EMDs should have advanced medical knowledge.* Because the EMD is operating in a blind environment, having actual "hands-on" advanced medical knowledge is not required. The basic medical concepts presented in this NHTSA curriculum provide sufficient medical knowledge for the EMD to operate effectively.

3) *EMDs should relay confidential information to responding personnel.* The EMD should NEVER relay confidential information to responders, including HIV status. The potential for lawsuits is enormous. Confidentiality laws exist to protect citizens.

4) *EMDs should fear being sued for giving medical instructions.* As long as you are following the procedures outlined by your agency and using the scripts presented in your locally approved EMDPRS, you are okay. The medical information you are presented with during your training (and found in your EMDPRS) are designed to help, not hurt, patients.

5) *EMDs should fear telling callers that an ambulance is "on the way."* This is obviously wrong. One fear that callers have is that help isn't coming. Telling a caller that an ambulance is "on the way", ***once one has been dispatched***, helps callers relax a little, making it easier for you to enlist their help in providing medical assistance to the patient.

Appropriate Concerns and Dangerous Practices/Behaviors

What to be concerned about. The following are dangerous EMD practices and behaviors with which you should be familiar:

1) *failing to send emergency medical services when requested;*

2) *subjective judgment of caller credibility;*

3) *subjective judgment of the validity of caller's chief complaint;*

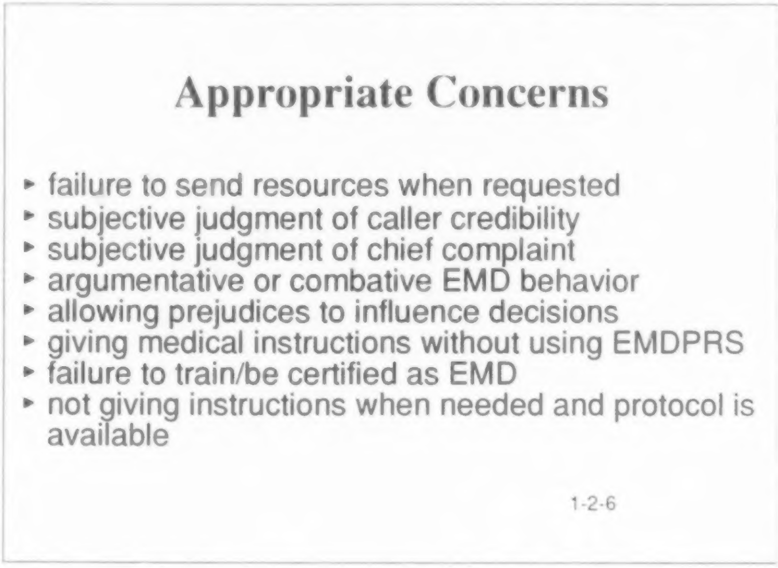
4) *argumentative/combative attitude on the part of the EMD;*

5) *allowing prejudices to affect objective decision making;*

6) *giving medical instruction without using locally approved EMDPRS;*

7) *failure to train and be certified as an EMD and*

8) *not giving instructions when they are needed and you have a protocol for it.*



Appropriate Concerns

- failure to send resources when requested
- subjective judgment of caller credibility
- subjective judgment of chief complaint
- argumentative or combative EMD behavior
- allowing prejudices to influence decisions
- giving medical instructions without using EMDPRS
- failure to train/be certified as EMD
- not giving instructions when needed and protocol is available

1-2-6

Avoiding/Reducing Liability (Risk Management)

Avoiding Liability. In an effort to avoid liability, it must be approached at two levels - agency and individual. Remember, avoiding liability means being able to avoid being found liable in a court of law.

Agency Methods. Agencies can use the following methods in an effort to avoid liability. Look for these types of policies/procedures in your agency:

1) Existence of well-defined screening/hiring procedures, used in an effort to select the best candidates for EMD.

2) Use of a well-organized, written orientation and training program for new employees.

3) Regular and objective progress reports given to probationary personnel.

4) Clearly defined job expectations and work descriptions.

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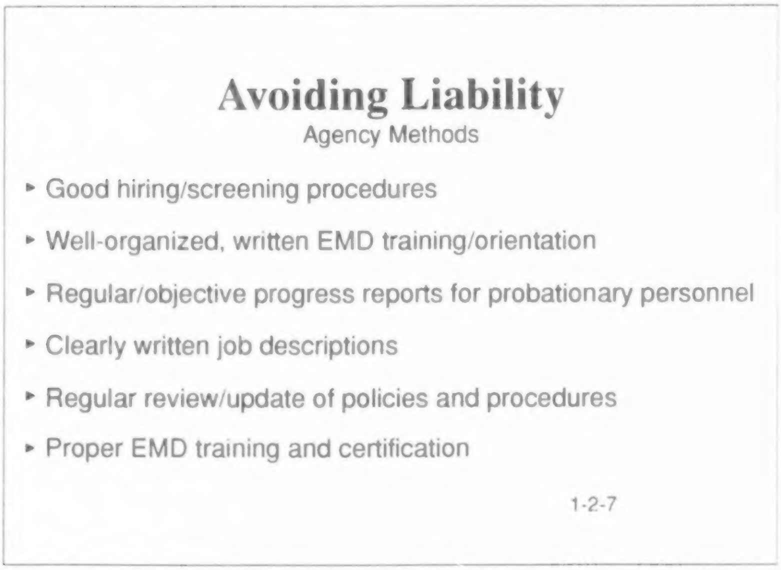
5) Regularly reviewed and updated policies and procedures.

6) Proper EMD training and certification provided.



Avoiding Liability

Agency Methods

- Good hiring/screening procedures
- Well-organized, written EMD training/orientation
- Regular/objective progress reports for probationary personnel
- Clearly written job descriptions
- Regular review/update of policies and procedures
- Proper EMD training and certification

1-2-7

7) Appropriate implementation of an EMD program.

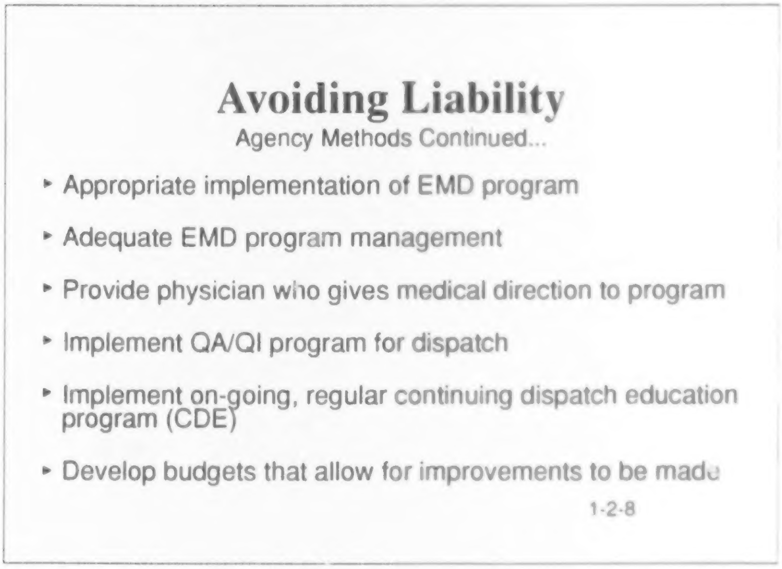
8) A well-managed EMD program.

9) Existence of a formal relationship with a physician who gives medical direction to the EMD program.

10) A quality assurance/quality improvement (QA/QI) program implemented for dispatch.

11) Existence of an on-going, regular continuing education program.

12) Budgets that allow for QA/QI improvements (including updating training materials and providing personnel and overtime required to carry out these functions).



Avoiding Liability

Agency Methods Continued...

- Appropriate implementation of EMD program
- Adequate EMD program management
- Provide physician who gives medical direction to program
- Implement QA/QI program for dispatch
- Implement on-going, regular continuing dispatch education program (CDE)
- Develop budgets that allow for improvements to be made

1-2-8

Individual Methods. In addition to the methods described above, there are ways that you (as an individual) can avoid liability. These methods are described below.

1) Avoid inappropriate behaviors that have been described in this unit and in Unit 1.

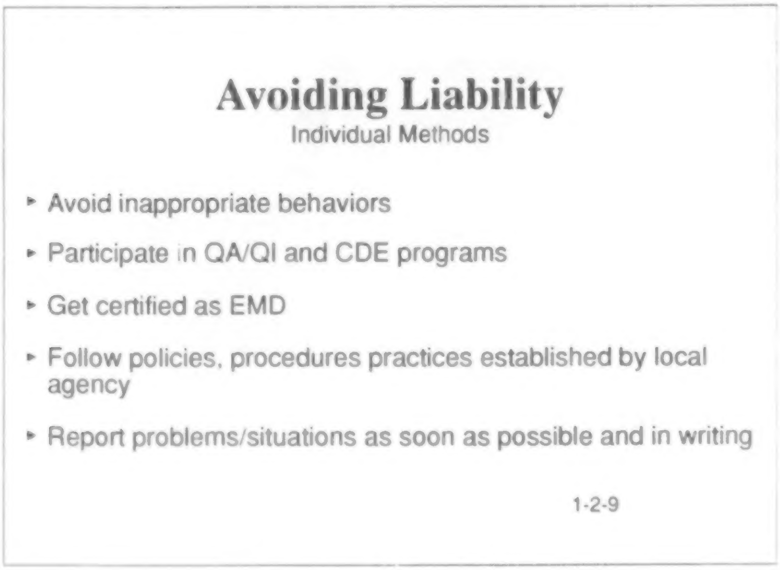
2) Actively participate in QA/QI and continuing education programs.

3) Seek and obtain certification as an EMD.

4) Follow the EMDPRS and the policies, procedures and practices established by your agency and the local community.

5) Strictly adhere to the protocols and training of the EMDPRS.

6) Report any problems or problematic situations as soon as possible and in writing.



Avoiding Liability

Individual Methods

- Avoid inappropriate behaviors
- Participate in QA/QI and CDE programs
- Get certified as EMD
- Follow policies, procedures practices established by local agency
- Report problems/situations as soon as possible and in writing

1-2-9

Summary

This unit has provided you with information about the legal aspects of your job. The purpose of the unit was to provide you with information that would make you comfortable doing your job without undue concern about lawsuits.

You have learned some basic legal concepts that impact your job. This unit also gave you information on the two-pronged approach to avoiding liability through agency and individual methods. Information about additional misconceptions that people have about EMDs and legitimate concerns that you should have were also presented.

The next unit prepares you for EMD by introducing you to some medical concepts that you will have to deal with on a daily basis. These terms and concepts must become familiar to you.

UNIT OVERVIEW

As an EMD, you respond to many medical/traumatic emergencies as a regular part of the job. Therefore, it is very important that you know some basic medical information that will assist you in determining the nature and needs of medical emergencies. This information will also make it easier for you to communicate with various people within the EMS system.

Unit 3, Introduction to Emergency Medical Concepts provides you with that basic medical knowledge. You will learn about the seven systems of the body, as well as learn what *really* kills patients. Also included in this unit is basic information regarding shock, bleeding, respiratory distress and a glossary of common medical terms that you will hear at your job.

UNIT OBJECTIVES

Unit Learning Objective

Upon completion of this unit, you will be able to:

4. Describe medical concepts as they relate to the EMD function.

Enabling Learning Objectives

To meet the unit learning objective, you will:

4.1 Describe the seven systems of the body.

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4.2 Describe what really kills a patient.

4.3 Define shock.

4.4 Describe methods for dealing with bleeding patients and patients in shock.

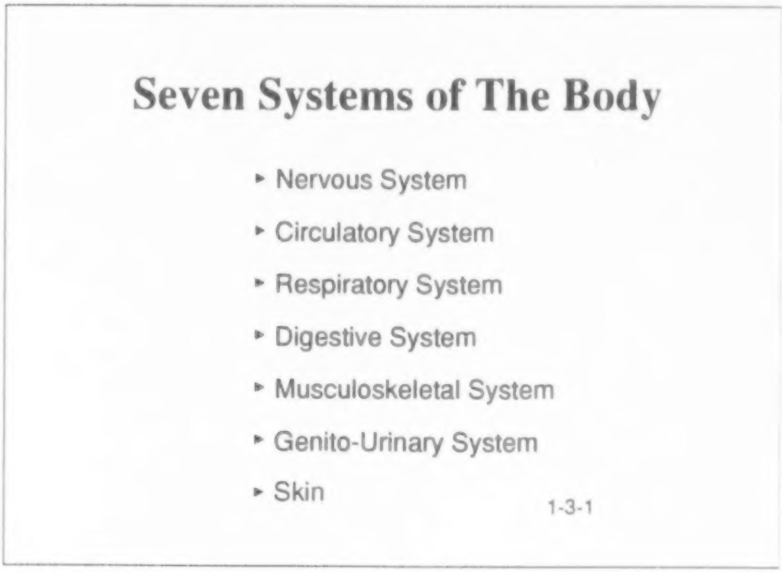
4.5 Describe the levels of consciousness and how to determine them.

SYSTEMS OF THE BODY

The human body is a complex organism. To lessen this complexity, it helps to think of it in terms of having seven major systems. Each system has a specific function and, in ***most*** cases, operates using an entirely different set of organs than the other systems. These systems are explained below.

Seven Systems of The Body

Each system has its own job and special functions that make it different from the other systems. You will learn about the Nervous System, Circulatory System, Respiratory System, Digestive System, Musculoskeletal System, Genito-Urinary System and Skin. Each of these systems is described below.



Seven Systems of The Body

- Nervous System
- Circulatory System
- Respiratory System
- Digestive System
- Musculoskeletal System
- Genito-Urinary System
- Skin

1-3-1

System 1: The Nervous System. The nervous system is that part of your body that controls all of your body functions and allows for interaction with the outside world through sensation. This system is made up of the brain, spine, spinal column and all of your nerves.

The nervous system is made of three smaller subsystems; the *Central Nervous System*, the *Peripheral Nervous System* and the *Autonomic Nervous System.* Each of these systems is described below.

1) The *Central Nervous System* is made up of the brain and the spinal cord.

    a) *The Brain.* The brain is the control center of the body. Nothing in the body happens without first being told to do so by the brain. It receives input from the nerves that are placed throughout your body and directs all of your body functions. The brain is also responsible for reason and thought.

    b) *The Spinal Cord.* The spinal cord acts as an electric cable throughout your body. It is responsible for carrying messages from all parts of your body to the brain. It also carries messages from the brain to the parts of your body.

2) The *Peripheral Nervous System* is made up of motor and sensory nerves.

    a) *Motor nerves* are responsible for controlling movement. They tell muscles in your body to contract ("flex") or relax, causing movement.

b) *Sensory Nerves.* These nerves send messages to the brain (and get messages from the brain) about the world around you. They are responsible for recognizing feelings of hot, cold, light, pain, smell, taste, motion and balance.

3) The *Autonomic Nervous System* is also made up of motor nerves, like the peripheral nervous system.

a) It transports messages from the brain to the body using the motor nerves like the peripheral nervous system. It provides automatic and unconscious monitoring and regulation of internal body functions.

b) Its functions include heartbeat, the force of the heart's contractions, blood vessel diameter, bronchial diameter and pupil dilation and contraction in response to light levels.

The Nervous System

Parts

- Central Nervous System
  - brain and spinal cord
- Peripheral Nervous System
  - motor and sensory nerves
- Autonomic Nervous System
  - like the peripheral nervous system, it uses motor nerves
  - automatic, unconscious monitoring/regulation of internal body functions (like heartbeat, bronchial diameter, etc.)

1-3-2

System 2: The Circulatory System. The circulatory system carries blood to and from all parts of the body. The blood takes nutrients and oxygen (O_2) to the cells of the body and takes carbon dioxide (CO_2) and other waste products from the cells for removal from the body. The circulatory system is made up of the heart, arteries, veins and capillaries.

1) The *Heart* is a four chamber pump and is the most efficient pump known to man. It is located below and to the left of the breastbone (sternum). It pumps blood through a series of one-way valves.

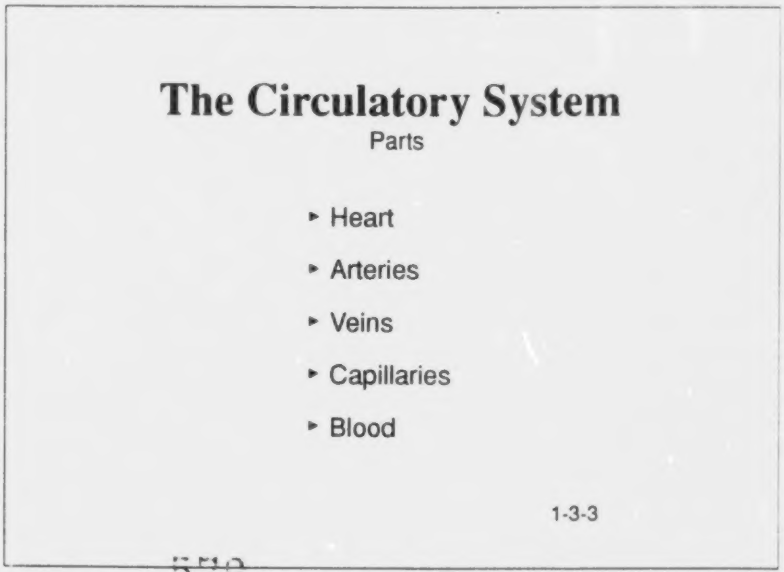
2) *Arteries* carry oxygenated blood (blood that is carrying oxygen to cells) away from the heart to the body. Arteries have thick walls that expand and shrink as blood goes through them. They get smaller the further they get from the heart. Most arteries are protected from damage by being buried deep within the muscles or being protected by bones. If cut, arteries bleed a lot of bright red blood that comes out in "spurts."

3) *Veins* carry blood toward the heart. This blood has dropped its oxygen payload off for use by the cells and carries cell waste products and carbon dioxide away from the cells, to be eliminated from the body. Veins get larger as you get closer to the heart and do not expand or contract like arteries. If cut, they too can bleed a lot. However, this blood "flows" (not spurts) from the wound and is a dark red color.

NOTE: A normal adult has approximately 5-6 liters of blood. Simple cuts should clot within 6 to 10 minutes.

4) *Capillaries* are thin-walled vessels. They are found between arteries and veins throughout the body. Capillaries carry oxygenated blood from the arteries to the cells of the body and exchange it for carbon dioxide and other waste products made by the cells. The waste products and blood are then taken to the veins and carried back to the heart. If cut, they "ooze."

5) *Blood* is made of *plasma* (fluid that carries carbon dioxide, nutrients, hormones and water) *red blood cells, white blood cells* and *platelets. Red blood cells* carry oxygen to the cells and carbon dioxide away from the body (oxygen sticks to a substance known as *hemoglobin*). *White blood cells* fight diseases, and *platelets* are used to create clots.



The Circulatory System

Parts

- Heart
- Arteries
- Veins
- Capillaries
- Blood

1-3-3

System 3: The Respiratory System. The respiratory system is the system that makes/lets us breathe. It takes in the oxygen we need and is responsible for carrying out waste products, like excess water and carbon dioxide. It also is used to help you maintain your body temperature (known as "temperature regulation").

NOTE: It is absolutely necessary to the survival of a human that breathing continue. If breathing stops, the person will die.

Respiration (breathing) is an automatic function. It is controlled by respiratory centers in the brain that are sensitive to the level of carbon dioxide in your blood. Carbon dioxide levels are constantly being monitored by carbon dioxide and oxygen sensors that are located in your carotid arteries (on the sides of your neck). When oxygen levels are too low you will breathe faster. If the carbon dioxide level gets too high, again, you will breathe faster.

NOTE: Airway obstructions can occur at any point in the respiratory system. It is important to note this and that obstructions don't just occur in the "throat."

Agonal respirations are breaths that occur after cardiac arrest and are ineffective in gathering oxygen for the body. They are frequently described as "weak," "heavy," "gasping," "snoring," "gurgling" or "moaning." The rate at which these respirations occur are usually referred to as "weak or heavy," "occasional" or "every once in a while."

Generally the caller will not identify cardiac arrest to you because the patient shows these respirations. In some cases, you can identify these respirations by listening. You may be able to hear the patient's breathing in the background (when the caller is near the patient).

The respiratory system is made up of the following parts:

1) The *pharynx* is a two channeled organ through which air enters and exits the body. It includes the nasal (in the nose) and oral phalanx (in the mouth). Air can travel in or out through either one of these.

2) The *epiglottis* is a leaf-shaped organ that hangs over the opening of the larynx. When you swallow, it covers the larynx, making food go down the esophagus instead of to the lungs.

3) The *larynx* is the narrowest part of the respiratory system. Also called the "voice box," it is called this because the vocal cords are found here. If anything gets past your epiglottis and touches them, they will clamp down in an effort to protect your lungs.

4) The *trachea* is a round air passage (tube) that is approximately four inches long, through which air passes in and out. It is held open by a series of cartilage "rings."

5) The *bronchi* are two passages, each passage going to a lung.

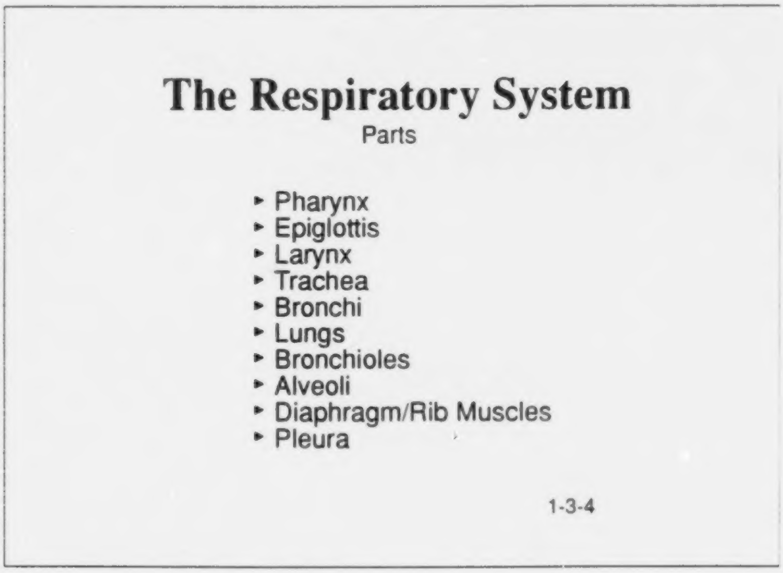
6) The *lungs* are where the actual exchange of oxygen and carbon dioxide takes place. Normal humans have two lungs, with the right lung divided into three lobes and the left lung divided into two lobes.

7) *Bronchioles* are small air tubes that are found in the body of the lungs. They are simply bronchi that are broken down into smaller branches.

8) The *alveoli* are small (microscopic), thin walled air sacs. The oxygen exchange takes place across the membranes between the alveoli and the capillaries.

9) *Diaphragm/Rib Muscles* are used to expand (during inhalation) or contract (during exhalation) your lungs. The diaphragm is the major muscle of breathing. "Intercostal muscles" are located between the ribs and also help you breathe.

10) *Pleura* are two thin membranes covering the surfaces of the lung. They serve to lubricate the lung and allow it to easily expand (during inhalation) and contract (during exhalation).

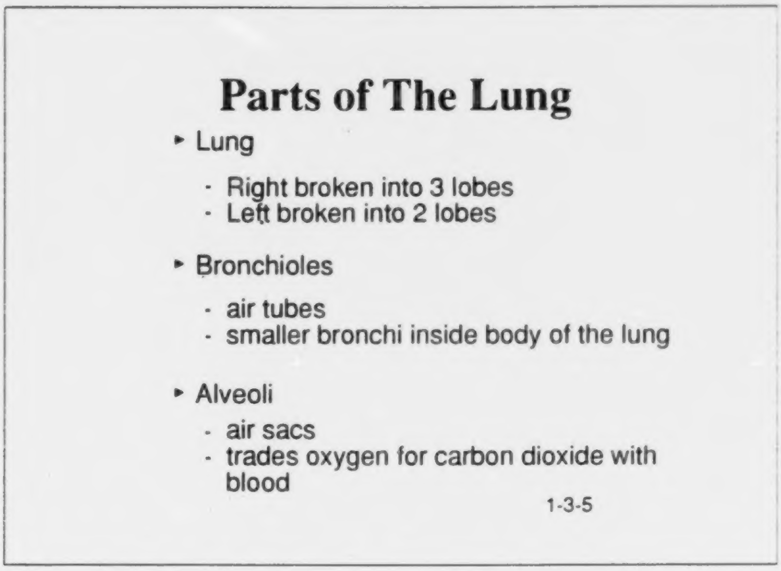


The Respiratory System

Parts

- Pharynx
- Epiglottis
- Larynx
- Trachea
- Bronchi
- Lungs
- Bronchioles
- Alveoli
- Diaphragm/Rib Muscles
- Pleura

1-3-4



Parts of The Lung

- Lung
    - Right broken into 3 lobes
    - Left broken into 2 lobes
- Bronchioles
    - air tubes
    - smaller bronchi inside body of the lung
- Alveoli
    - air sacs
    - trades oxygen for carbon dioxide with blood

1-3-5

System 4: The Digestive System. This is the system that is responsible for your eating, digesting food and liquids and eliminating waste. The process of digesting food provides your cells with the fuel they need to work. There is only a small number of foods that can be used directly without being broken down.

The digestive system is made of the following components:

1) The *mouth* chews food, moistens food with saliva and starts the swallowing process. Saliva is produced by your salivary glands at a rate of about 1.5 liters per day. Chemicals in your saliva start digestion by beginning to break down food.

2) Your *throat* consists of the pharynx which is used to transport both food and air. When this is blocked, it is called an "airway obstruction."

3) The *esophagus* is about ten inches long. It forces food down toward the stomach by constant, rhythmic contractions which begin at the top and go to the bottom.

4) The *stomach* receives and stores food. It helps push food down toward the bowels. The stomach makes 1.5 liters of *pepsin* per day. Pepsin is used to break down proteins. Digestion in the stomach usually lasts one to three hours.

5) Your *small intestine* receives liquids made by your pancreas, liver and gall bladder. These are used to further digest food. The small intestine is approximately twenty feet long and is made of three sections; the duodenum, jejune and ilium.

6) Your *large intestine* is approximately five feet long. Its main purpose it to absorb liquid from digested food as it passes through. It absorbs approximately 5-10% of the moisture residing in the products of digestion.

7) The *liver* is a very important organ. It changes sugars, fatty acids and amino acids into simpler products for the body to use. It also neutralizes the harmful products that are produced by digestion. Sugars that are to be used immediately by the body are stored there. The liver also produces products that help your platelets clot, and it also makes products that improve your body's ability to fight diseases.

The Digestive System

Parts

- Mouth
- Throat
- Esophagus
- Stomach
- Small Intestine
- Large Intestine
- Liver

1-3-6

8) The *gall bladder* produces and stores bile (approximately 2-3 oz). Bile is used to digest fats in your food.

9) The *pancreas* regulates the level of sugar in the blood and also makes juices/enzymes that digest fats, starches and proteins. It has two main functions; producing the enzymes that digest fats, starches and proteins and producing *insulin* (which regulates sugar levels in the blood stream).

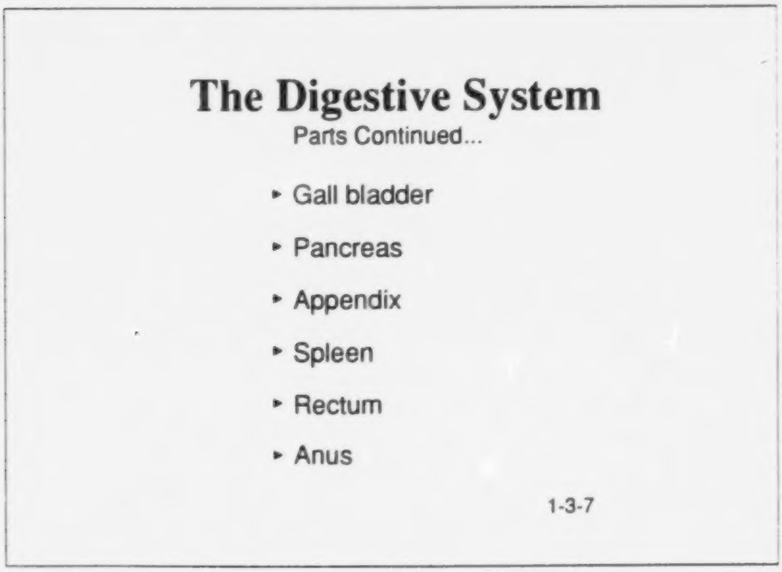
10) The *appendix* is thought to play a part in the immune responses of children. It is about three to four inches long and has no other known purpose.

11) The *spleen* produces and destroys blood cells. It's most important role is in fighting infection by acting as a filter to eliminate bacteria from the bloodstream. If destroyed, part of it's function can be taken over by the bones and marrow in your body.

582

12) The *rectum* is a large, hollow organ used to store feces until expelled.

13) The *anus* is about two inches long. It controls the escape of liquids, gases and solids produced by digestion through contraction of the *sphincter muscle.*



The Digestive System

Parts Continued...

- Gall bladder
- Pancreas
- Appendix
- Spleen
- Rectum
- Anus

1-3-7

System 5: The Musculoskeletal System. This is the system of bones, muscles and their connecting tissues. It gives support for the body and provides movement through the actions of muscles and joints. Vital organs like your lungs and heart are protected by bones, which also are responsible for making and destroying blood cells. Bones are also important for storing minerals that your body needs.

Muscles are attached to bones. Muscles allow you to move through their contracting and relaxing actions. They also help us breathe (remember the diaphragm?), they help circulate blood (the heart *is* a muscle) and they aid in digestion (the stomach).

The musculoskeletal system is made up of the following; the head, vertebral column, chest, upper extremities, pelvis and lower extremities. Other parts include the three types of muscles, tendons and ligaments.

1) The *head* is composed of four bone groups; the *skull* (includes the cranium and base), the *face, maxillary* (upper jaw) and *mandible* (lower jaw).

2) The *vertebral column* is also known as the *spinal column.* It has thirty-three bones, in the following order (head to tail); seven *cervical spine* (base of skull and neck), twelve *thoracic spine* (upper back), five *lumbar spine* (lower back), *sacral fused* (near pelvis) and *coccyx fused* (tailbone).

3) The *chest* is comprised of the ribs, sternum (breastbone), xiphoid and the vertebral column in the back.

4) The *upper extremity* is made of:

    a) the *shoulder girdle,* which is made of the *clavicle* (collarbone), the *scapula* (shoulder blade) and the *shoulder joint;*

    b) the *arm,* which is made of the *humerus* (upper arm);

    c) the *forearm,* which is made of the *radius* and *ulna* and

    d) the *hand,* which is made of *carpals, metacarpals* and *phalanges.*

5) The *pelvis* is made of the *ilium*, the *pubic symphysis* and the *iliac crest.*

6) The *lower extremitv* is made of:

  a) the *upper leg*, which is made of the *femur* (thigh bone), *knee joint* and *patella* (kneecap);

  b) the *lower leg*, which is made of the *tibia* and *fibula* and

  c) the *foot* which is made of *tarsals, metatarsals* and *phalanges.*

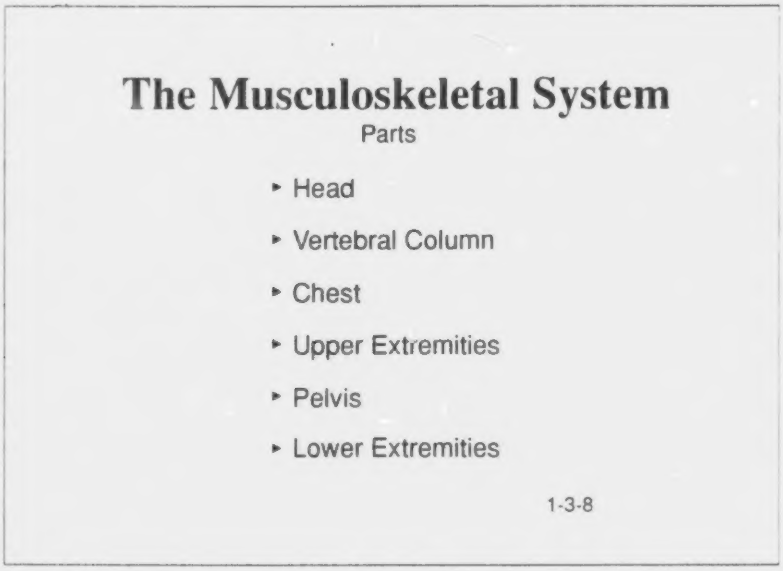
7) The three types of *muscles* include:

  a) *voluntary muscles*, which are consciously controlled (like when you are walking);

  b) *involuntary muscles*, which are unconsciously controlled (like blood vessels, diaphragm) and

  c) *cardiac muscles*, which are the muscles that make the heart pump. The contractions are controlled by the autonomic nervous system and by hormones.

8) *Tendons* and *ligaments* are connective tissues. Tendons connect your muscles to your bones. Ligaments connect your bones to other bones.



The Musculoskeletal System

Parts

- Head
- Vertebral Column
- Chest
- Upper Extremities
- Pelvis
- Lower Extremities

1-3-8

System 6: The Genito-Urinary System. This system is made up of the organs of waste elimination and reproduction.

All humans have the following four parts in their urinary system. This system is responsible for the removal of liquid wastes from the body and is composed of:

1) *kidneys*, which are used to filter wastes from your blood stream and make urine;

2) *ureters*, which are tubes that connect kidneys to the urinary bladder and through which urine flows to the bladder;

3) a *urinary bladder*, which is the reservoir for urine and

4) a *urethra*, which is the tube that urine passes through on the way out of the bladder and body.

The human reproductive system differs between men and women. Each has its own parts and functions. Female and male reproductive systems are described below.

1) The *female reproductive system* is made of the following parts:
   a) *fallopian tubes,* which carry eggs from the ovaries to the uterus;
   b) *ovaries,* which produce female hormones; mature, store and release eggs;
   c) *uterus,* where the fetus (fertilized egg) develops and where menstruation (periods) occurs and
   d) *vagina,* the birth canal through which babies are born.
2) The *male reproductive system* is made of:
   a) the *prostate,* which surrounds the urethra and produces the fluid that makes up most of the bulk of semen;
   b) *testes,* which produce sperm and male hormones;
   c) *scrotum,* which surrounds and protects the testes and
   d) the *penis,* which contains the urethra and through which semen and urine passes.

The Genito-Urinary System

Parts

- Kidneys
- Ureters
- Bladder
- Urethra
- Female Reproductive System
- Male Reproductive System

1-3-9

System 7: The Skin. The skin is the outer covering of the body and is the largest organ of the body.

Skin serves as a protective barrier against microorganisms, protects the soft tissues and organs below it from injuries and acts like insulation against heat and cold. It even helps remove wastes from the body through sweat.

The skin performs other important functions as well. It provides protection against the sun's rays through pigmentation and it helps convert some of the sun's energy into vitamin-D. Finally, receptors in the skin enable the body to sense pain, heat, cold, touch and pressure.

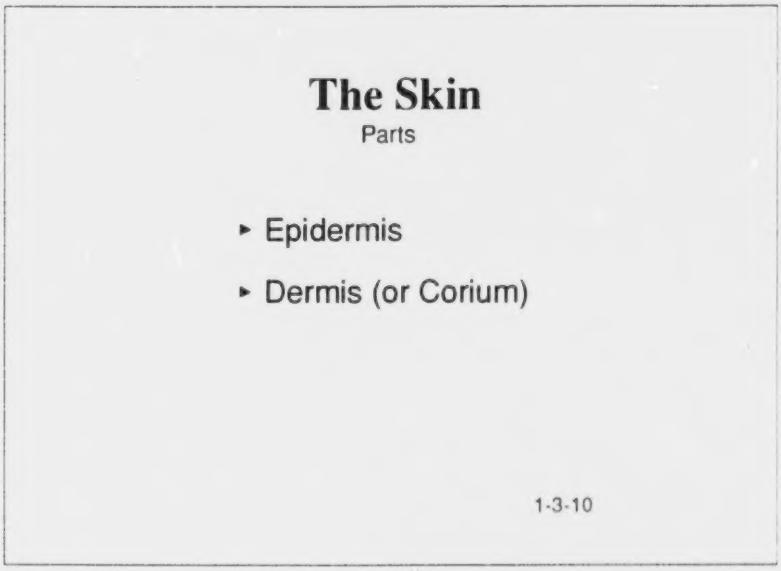
The skin consists of the following two major components:

1) The *epidermis* is the thin, outer layer of skin. It is made up of various cell types, and its thickness varies across different areas of the body (thickest in the hands and feet). The outer layer of the epidermis is constantly being shed. Its cells are non-living and require no blood for nourishment. As long as the epidermis remains intact, no microorganism can enter the body through the skin.

2) The *dermis* (or *corium*) is the inner layer of skin. It is the thickest layer of the skin.

   The dermis is made up of connective tissue that contains nerves, sweat glands and blood vessels. Sensations like heat, cold, touch, etc. are felt through the nerves found here.

   The body's reaction to heat and cold causes the expansion and contraction of the blood vessels found in the dermis. As a result of the expansion and/or contraction of the blood vessels in the dermis, more or less blood flows through the vessels. The end result of this expansion/contraction is the loss or conservation of body heat.



The Skin

Parts

- Epidermis
- Dermis (or Corium)

1-3-10

Exercise 1: **Systems of the Body - Match Game**

Instructions: On the following page is a table consisting of questions and answers. In the left column are twelve answers. Write the number of the question that corresponds to the answer found in the left column.

Write your answers on the lines provided on the left side of the table. You have ten minutes to complete this exercise. Upon completion of this exercise, the instructor will review the answers with you. Be sure to ask any questions you may have at this time.

	Answers	***Questions***
	Central, peripheral and autonomic	1. Narrowest part of the respiratory system; aka "voice box"?
	Pharynx	2. Parts of the pelvis?
	Pancreas	3. Connect muscles to bones?
	Motor and sensory	4. Four major parts of the circulatory system?
	Kidneys, ureters, urinary bladder and urethra	5. Three subsystems of the nervous system?
	Ilium, pubic symphysis and iliac crest	6. Carry oxygen to the cells?
	Heart, arteries, veins and capillaries	7. Regulates level of blood sugar; produces enzymes that break down starches, fats and proteins?
	Ligaments	8. Carry oxygenated blood to the body, away from the heart?
	Red blood cells	9. Connect bones to bones?
	Larynx	10. Two nerve types of the peripheral nervous system?
	Tendons	11. Parts of the urinary system?
	Arteries	12. Two channeled body through which air enters/exits the body?

What Really Kills Patients?

Now that you understand the basics of the seven systems of the body, you need to understand what really kills patients.

Many traumatic emergencies get worse as time passes, while medical emergencies tend to get better over time. Three problems can worsen the medical situation over time. These are (1) severe blood loss, (2) breathing obstructions and (3) cardiac arrest. The EMD can have the most effect on these three situations by instructing callers in some form of emergency medical intervention.

Death is caused by many things. *Traumatic causes* are blood loss, airway obstructions that prevent breathing, shock and brain/spinal cord damage. The most common *non-traumatic* cause of death is cardiac arrest.

Levels of Consciousness, Shock and Respiratory Distress

Consciousness, shock and respiratory distress are the 3 major criteria used to determine dispatch categories. At this point you need to know a few things that will help you better do your job.

1) Consciousness is very hard to determine without actually seeing the patient. *You must rely on the protocols and information from callers to get you this information.* The protocols are designed to help you do this.

2) Not all sick people appear sick. At the same time, patients in shock or respiratory distress will look sick. When responding personnel get to the patient and they see a pale, diaphoretic ("sweaty"), weak and nauseous person they immediately know they have a sick person on their hands.

3) It is up to you to be able to recognize these truly sick people based on the information you get from callers.

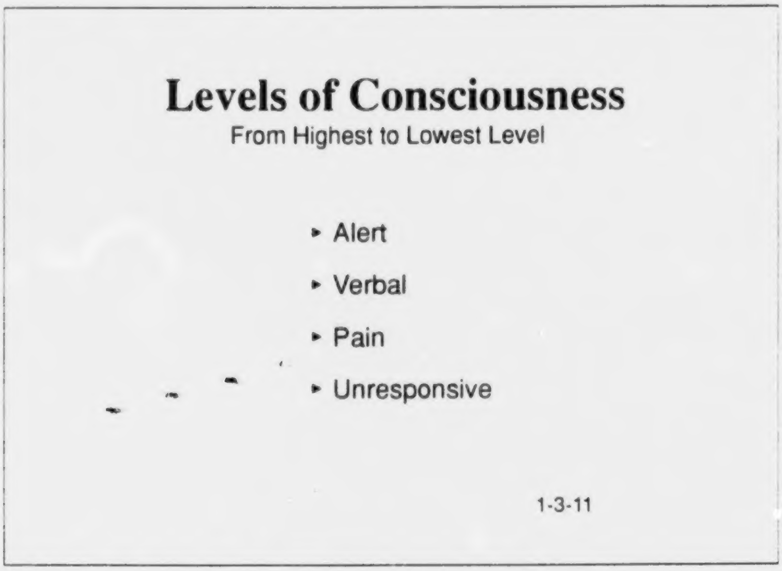
Levels of Consciousness. There are four levels of consciousness that you need to learn. They are taught in order of their level of severity, with alert being the highest level and unresponsive being the lowest and most serious.

1) *Alert* (is the patient awake and aware of their surroundings?) is the highest level of consciousness. If a patient is determined to be alert, then there is less cause for concern.

2) *Verbal* is the second highest level of consciousness. These patients are awake only when you talk to or yell at them (verbal stimulus). They tend to fall asleep unless you constantly talk to them.

3) *Pain* is the second lowest level of consciousness. A person in this state is only able to be awakened with noxious (painful) stimuli. They require noxious stimulants to stay awake.

4) *Unresponsive* is the lowest and most dangerous level of consciousness. Patients in this state can't be aroused by *any* stimulus.



Levels of Consciousness

From Highest to Lowest Level

- Alert
- Verbal
- Pain
- Unresponsive

1-3-11

Determining Consciousness. How can you determine consciousness? Your EMDPRS protocols will help you figure out a patient's consciousness level. Generally, you can determine consciousness by asking the caller:

1) Is the patient awake?

2) Have you tried to wake them up?

3) Can they talk to you?

Don't worry about using consciousness categories with the responders. For example, if the caller says that the patient is talking gibberish and can only stay awake when they yell at him, then tell that to the responding personnel. You just need to recognize the level of consciousness and dispatch accordingly.

NOTE: From a dispatcher's perspective, you are trying to determine whether a patient is conscious or is in an altered state of consciousness. Your priority is airway maintenance. It is not so important to determine why the patient is unconscious, all that matters is that the patient ***is*** unconscious. If the patient is unconscious, turn them on their side and monitor their breathing.

?

QUESTION: *Can you describe the levels of consciousness? How do you determine each level of consciousness?*

Shock. Shock is a major killer of patients. It can rapidly appear almost without symptoms. For this reason, shock is often called the "silent killer." It is defined as "inadequate tissue perfusion." This simply means that there is a lack of circulation throughout the body, but most importantly to the major organs (heart, lungs, brain, kidneys, etc.).

1) *Symptoms of shock* (described by patient) include the following. Not all patients show these, and sometimes **none** are present:

   a) a feeling of "impending doom" (that something terrible is going to happen soon, that death might be imminent);

   b) weakness;

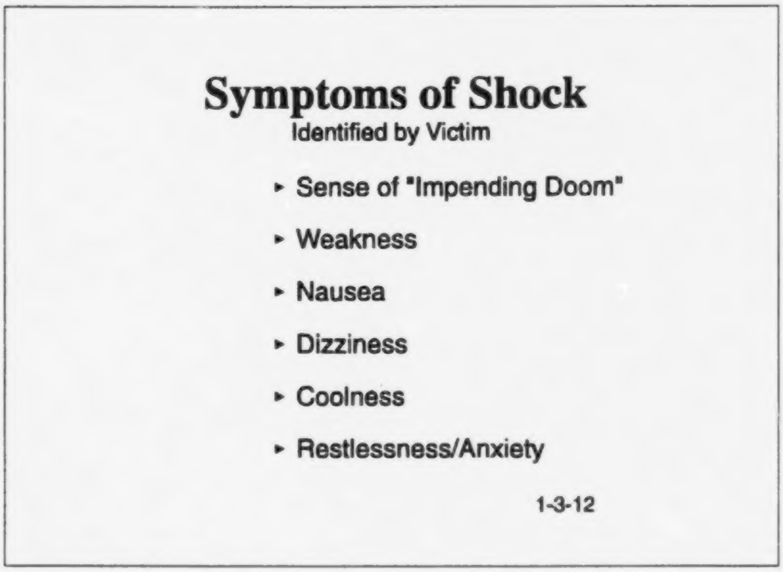
c) nausea;

d) thirst;

e) dizziness;

f) coolness and

g) restlessness/anxiety.



Symptoms of Shock

Identified by Victim

- Sense of "Impending Doom"
- Weakness
- Nausea
- Dizziness
- Coolness
- Restlessness/Anxiety

1-3-12

2) *Signs of shock* (described by the caller based on their own observation) include the following:

a) pale, cool and/or moist skin;

b) shallow and/or rapid breathing;

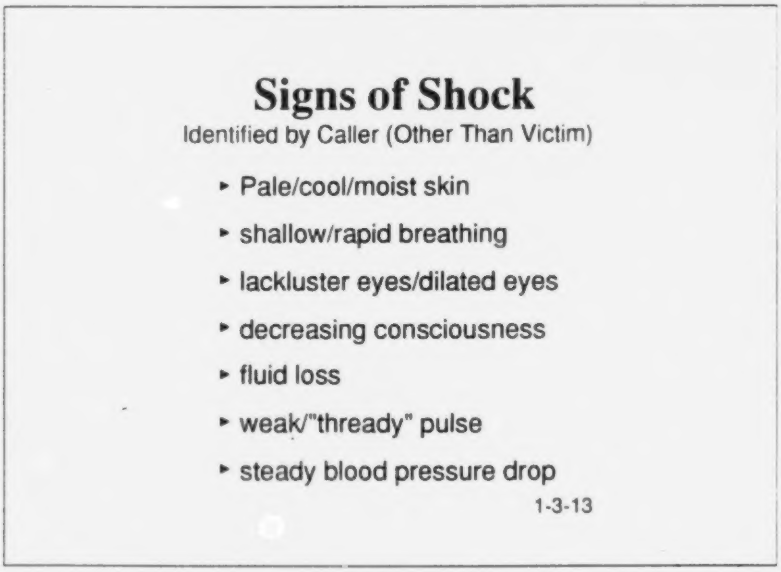
c) lackluster eyes and/or dilated pupils (pupils appear larger than they should);

d) decreasing levels of consciousness leading to unconsciousness;

e) fluid loss from bleeding, vomiting or diarrhea;

f) weak or "thready" pulse and

g) a steady drop in blood pressure.



Signs of Shock

Identified by Caller (Other Than Victim)

- Pale/cool/moist skin
- shallow/rapid breathing
- lackluster eyes/dilated eyes
- decreasing consciousness
- fluid loss
- weak/"thready" pulse
- steady blood pressure drop

1-3-13

☛ **Types of shock.** There are many types of shock. You may never encounter them all, but the most common are listed and described below.

1) *Anaphylactic shock* (also called "allergic shock") usually accompanies the ingestion or inhalation of a substance to which a patient is severely allergic. It frequently occurs with insect stings as well. Signs and symptoms include difficulty breathing, swelling of the face and or tongue, tightness in the chest, itching/burning skin and hives covering large parts of the body.

2) *Cardiogenic shock* occurs when the heart is no longer able to develop enough pressure to circulate blood properly.

3) *Hemorrhagic shock* occurs when the body loses large amounts of blood through internal or external bleeding. It also occurs with hypovolemic shock.

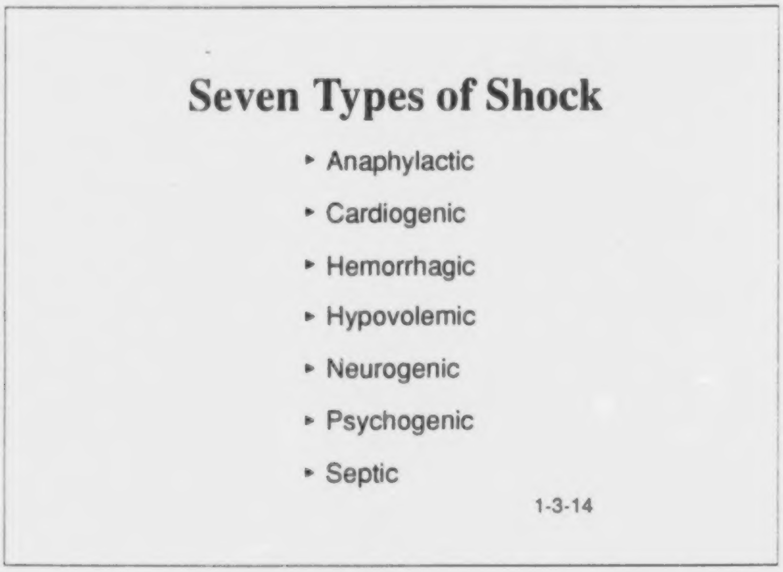
4) *Hypovolemic shock* occurs when the body loses large amounts of body fluids through vomiting or diarrhea.

5) *Neurogenic shock* usually occurs with spinal cord damage. Blood vessels that are normally tightened ("constricted") begin to relax and blood pressure rapidly drops. Blood begins to pool below the level of the spinal cord injury.

6) *Psychogenic shock* (aka "fainting;" aka "vasovagal reaction") occurs when blood vessels suddenly dilate (expand or relax) due to some shock to the system like extreme fear or minor injury. Blood flow to the brain is temporarily interrupted and the person "faints."

7) *Septic shock* is caused by severe infections. Toxic substances from the infection cause blood vessels to dilate and plasma to be lost through vessel walls.

☛ **NOTE:** The most common types of shock you will encounter are anaphylactic, cardiogenic, hemorrhagic, hypovolemic and septic.



Seven Types of Shock

- Anaphylactic
- Cardiogenic
- Hemorrhagic
- Hypovolemic
- Neurogenic
- Psychogenic
- Septic

1-3-14

Dealing With Shock. Shock can kill. There are any number of things you can tell callers to do to alleviate the danger of shock until help arrives. These are listed and described below.

1) DO NOT GIVE THEM ANYTHING TO EAT OR DRINK!

2) Make sure the patient's airway is clear so they can breathe.

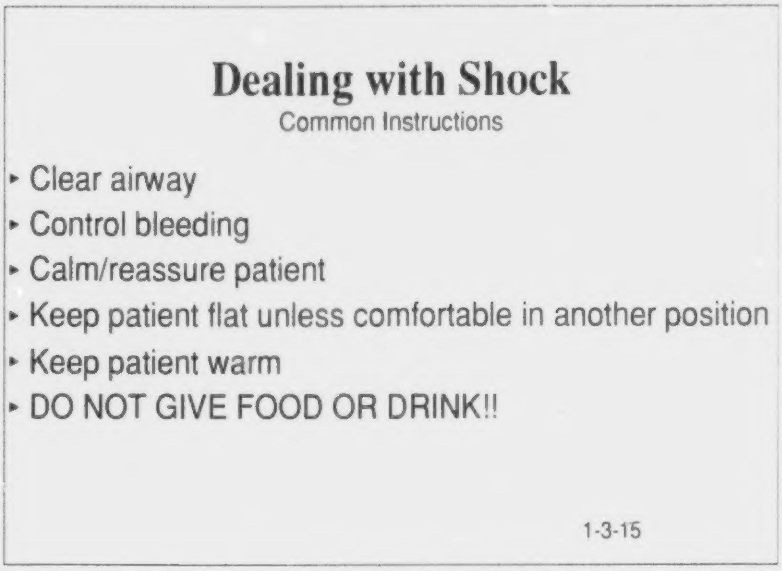
3) Control bleeding (if external) by the use of direct pressure.

4) Calm and reassure the patient.

5) Lay patient on side (preferably left-side) or allow them to remain in a position that is most comfortable, unless they are trauma patients.

6) DO NOT MOVE TRAUMA PATIENTS!!!!

7) Keep the patient warm and prevent the loss of body heat by covering the patient with something.



Dealing with Shock

Common Instructions

- Clear airway
- Control bleeding
- Calm/reassure patient
- Keep patient flat unless comfortable in another position
- Keep patient warm
- DO NOT GIVE FOOD OR DRINK!!

1-3-15

?

QUESTION: *What is shock? What are its signs and symptoms? Can you name five types of shock? How would you tell a caller to deal with shock?*

Respiratory Distress vs. Breathing Difficulty. Callers will often say that a person is "having a hard time breathing." It is up to you to determine if the caller is describing respiratory distress or breathing difficulty.

It is hard to tell if a patient is suffering from respiratory distress or has a breathing problem without understanding the difference. Each can occur from a variety of sources, including benign (not dangerous) sources like allergies or colds. Because of the difficulty in distinguishing true respiratory distress from breathing difficulty, these calls can be among the most challenging you will face.

Breathing Difficulty Scenarios

1) The breathing problem is present with other symptoms or chief complaint types (more on these in Module 3).

2) The patient appears sick, but it may be due to the chief complaint and not the breathing difficulty.

3) Most people have breathing difficulty when vomiting. However, this does not constitute "distress."

True Respiratory Distress

1) Patients in true respiratory distress are *very* sick people. These patients *look, act* and *sound* sick, usually being able to speak only short phrases (or 1 to 2 word sentences) if they have to speak. Their breathing may be described by callers as very "noisy" (***or very quiet***).

2) Patients in true respiratory distress are putting all of their efforts and energy into trying to breathe or getting where they think there might be more air. They look as if they were (and still are) working hard.

3) Patients in respiratory distress appear sweaty (diaphoretic), pale and sometimes blue (cyanotic). What is happening is that in cases of true respiratory distress, the patient is rapidly running out of oxygen, losing the ability to keep on breathing often due to fatigue or airway obstruction.

4) Choking is also a form of respiratory distress. Persons with obstructed airways will demonstrate classic choking symptoms. The caller will immediately recognize these as such, unless the caller was not present when the victim choked and found the victim in a collapsed state.

Signs and Symptoms of Respiratory Distress include any of the following. Symptoms and signs can occur in any combination. Some symptoms are:

1) Classic choking symptoms (clutching or grasping at the throat);

2) anxiety/restlessness (as the body reacts to a lack of oxygen to the brain);

3) cyanosis (patient turning blue);

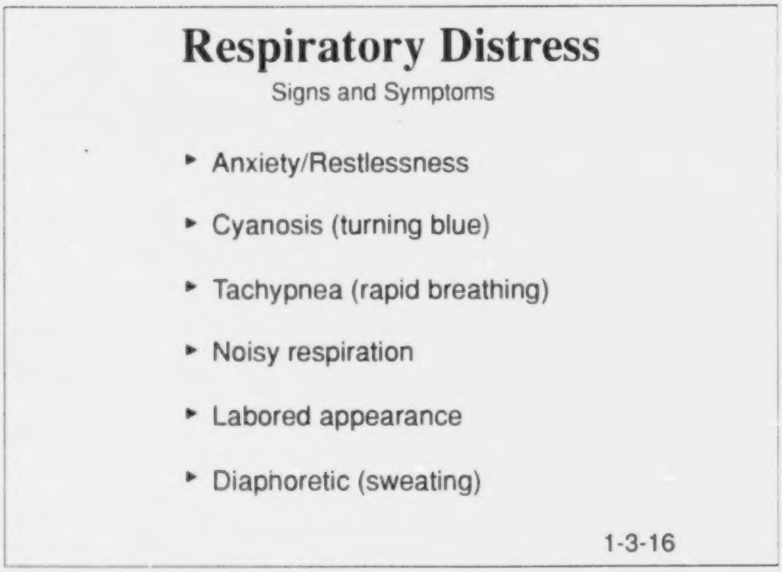
4) rapid breathing (tachypnea);

5) noisy respiration;

6) labored appearance; patient appears to be working hard and

7) the patient may be sweaty (diaphoretic).

QUESTION: *Can you describe respiratory distress? What are the major signs and symptoms of true respiratory distress? How is it different from breathing difficulty?*



Respiratory Distress

Signs and Symptoms

- Anxiety/Restlessness
- Cyanosis (turning blue)
- Tachypnea (rapid breathing)
- Noisy respiration
- Labored appearance
- Diaphoretic (sweating)

1-3-16

Bleeding

Bleeding has its own set of unique problems and may elicit strong emotional responses. Severe bleeding must be treated immediately.

The body attempts to stop bleeding using the process we call "clotting." Blood platelets break down and block the hole through which the blood is escaping. When the bleeding is severe (as with a cut artery), the clotting can't happen fast enough or completely enough to fill the hole, resulting in shock and then death.

Control of Bleeding. Almost all bleeding can be stopped through the use of *direct pressure.* The caller (or a bystander) is told to use a universal bandage or clean gauze pad and press down directly on the open wound. In most situations, callers won't have these. Tell them to use the cleanest cloth available.

> **NOTE:** ***This is very important.*** When telling callers to use direct pressure, tell them to *put a lot of pressure on the wound.* Using lots of pressure will stop even arterial bleeds.

Tell callers not to remove soaked bandages (or "dressing") because this will rip open the clot that is forming in the wound. If they feel they need to replace the bandage because it is soaked, simply place another on top and continue pressure. If the bleeding has stopped, they can tie the dressing in place with a bandage.

Elevate bleeding extremities. This method is good for extremities because it gets the bleeding limb up higher than the heart, thereby slowing the flow of blood through the force of gravity.

> **NOTE:** In cases of internal bleeding, you just need to recognize it due to shock issues...there's not a lot you can do about it!!!

A Word About Tourniquets. Tourniquets can cause a lot of damage by stopping the flow of blood completely through a limb (usually). This causes nerve and cell damage that is frequently permanent and can even be the cause for an amputation.

☛ **IF A CALLER SAYS THAT A TOURNIQUET HAS ALREADY BEEN APPLIED, LEAVE IT ON! NEVER INSTRUCT CALLERS TO APPLY A TOURNIQUET.**

Exercise 2: Bleeding, Shock and Respiratory Distress - Match Game

Instructions: On the following page is a table consisting of questions and answers. In the left column are ten answers. Write the number of the question that corresponds to the answer found in the left column.

Write your answers on the lines provided on the left side of the table. You have ten minutes to complete this exercise. Upon completion of this exercise, the instructor will review the answers with you. Be sure to ask any questions you may have at this time.

	Answers	*Questions*
	Symptoms	1. Characteristics described by callers about patients?
	"Impending doom," weakness, nausea coolness	2. ***Signs*** of shock?
	Shock	3. Types of shock?
	Signs	4. Signs of respiratory distress?
	Alert, Verbal, Pain and Unresponsive	5. Characteristics described by patients about themselves?
	Hypovolemic, hemorrhagic and anaphylactic	6. Process by which platelets break down and block holes where blood is escaping?
	Anxiety, cyanosis, rapid breathing, labored appearance, sweaty, noisy respirations	7. Inadequate tissue perfusion; aka "silent killer?"
	Neurogenic shock	8. Relaxation of blood vessels, allowing blood to pool below the level of the injury?
	Moist skin; shallow breathing; dilated pupils; decreasing consciousness	9. ***Symptoms*** of shock?
	Clotting	10. Four levels of consciousness?

Common Medical Terms

As an EMD you will hear many medical terms. It is important that you become familiar with these terms so you can interpret them for your own use, or as needed to callers. Over time you will become more familiar with them because you will hear them frequently.

Following is a list of terms with which you should become familiar.

1) ***Abdominal aortic aneurysm*** - dilated section of the lower aorta in the abdomen; can rupture causing severe pain, internal bleeding and even death

2) ***Abrasion*** - type of injury caused by the scraping away of portions of skin

3) ***Acute*** - sharp, severe or having rapid onset; usually short course and not chronic

4) ***Anaphylactic shock*** - state of collapse due to injection of or exposure to (including ingestion, breathing and skin contact) a substance to which the victim is allergic

5) ***Angina*** *(also angina pectoris)* - a steady, dull, squeezing pressure; choking or suffocating pain; almost exclusively used to indicate heart or chest pains; can radiate out to the neck, arms or shoulder; is due to the lack of adequate oxygen delivery to the heart muscle (through blockage of coronary arteries)

6) ***Anoxia*** - lack of oxygen

7) ***Appendicitis*** - inflammation of the appendix resulting in severe pain, fever and nausea

8) ***Arterial hemorrhage*** - bleeding from an artery; a cut or punctured artery will usually emit bright red blood in spurts or waves (though it can be a steady flow if the artery is deeply buried)

9) ***Asthma*** - disease characterized by spasms of bronchial tubes, resulting in shortness of breath and "wheezing"; can be fatal if not quickly treated

10) ***Benign*** - not dangerous; not recurrent or progressive

11) ***Blood pressure*** - the pressure exerted by the blood against the walls of the arteries as it travels through the body

12) ***Cardiac arrest*** *(aka "Sudden Death")* - sudden cessation of heart functions; usually confused with myocardial infarction (MI)

13) ***Carbon monoxide*** *(CO)* - a poisonous gas found mainly in exhaust fumes of gasoline and diesel powered engines

14) ***Cardiopulmonary Resuscitation*** *(also CPR)* - the act of attempting to restore consciousness via manual heart massage and lung inflation

15) ***Contusion*** *(aka "bruise")* - an injury in which the skin is not broken; usually due to sudden impact with hard objects

16) ***Cranial*** - pertaining to the skull

17) ***Croup*** - disease characterized by difficult breathing and feelings of suffocation accompanied by an intense, barking cough and swelling of the larynx and/or upper trachea

18) ***Crowning*** - a state of childbirth in which the baby's head is seen

19) ***Cyanosis*** *(also cyanotic)* - discoloration of the skin (usually a gray, blue or purple tint) due to a lack of oxygen in the blood

20) ***Diaphoresis*** - profuse sweating; is one symptom of respiratory distress but can occur for any reason

21) ***Ectopic pregnancy*** (aka "tubal pregnancy") - a potentially life-threatening circumstance when a fetus implants itself in a fallopian tube rather than the uterus; after growing there for approximately six weeks, the fetus may rupture through the wall of the tube, causing hemorrhage, severe pain and life-threatening internal bleeding

22) ***Hemoglobin*** - iron containing pigment of the red blood cells

23) ***Hematoma*** - swelling caused by blood outside of the blood vessel

24) ***Hemorrhage*** - Abnormal internal/external discharge of blood

25) ***Hiatal hernia*** - partial slippage of the upper stomach above the diaphragm; protrusion of the stomach through the diaphragm

26) ***Hives*** - eruptions of very itchy spots on the skin; usually associated with allergies

27) **Hyperventilation** - increase in the inspiration and expiration of air as a result of an increase in the rate or depth of respiration; usually accompanied by great anxiety; does not usually exist in isolation (is usually sypmtomatic of a more serious, underlying problem)

28) **Hyphema** - blood in the anterior chamber of the eye in front of the iris

29) **Hypothermia** - drastic lowering of body temperature usually caused by prolonged exposure to extreme cold

30) **Hypovolemia** - diminished blood volume

31) **Laceration** - a tear or cut in the flesh

32) **Meningitis** - inflammation of the spinal cord or brain causing intense headaches, intolerance to light or sound and possibly delirium, convulsions and/or coma

33) **Migraine** - severe headache, frequently resulting in disordered/distorted vision, nausea and vomiting

34) **Myocardial Infarction** *(aka M.I. or "Heart Attack")* - death of an area of the heart muscle due to obstructions in blood flow or sometimes confused with cardiac arrest which is the end result of an M.I.

35) **Ocular trauma** - injury to the eye

36) **Orbital fracture** - a break in the portion of the skull that encases the eyeball

37) **Paralysis** - loss or impairment of motor function due to injury in part of the body

610

38) ***Pericarditis*** - inflammation of the sac that encloses the heart

39) ***Perineum*** - the genital area

40) ***Pulse*** - a pressure wave exerted against the arteries upon the contraction of the heart; can be felt by placing fingertips on an artery where it passes close to the skin

41) ***Signs*** - something a rescuer can see, hear, feel and occasionally taste concerning a patient; *not the same as symptom*

42) ***Stroke*** - sudden interruption of blood flow to an area of the brain (due to obstruction, bleeding, clot, etc.) causing loss of strength, feeling, speech or even decrease in consciousness

43) ***Symptom*** - something a patient expresses about themselves; examples are "My chest hurts; I'm cold; I have a sharp pain in my head," etc.

44) ***Tachypnea*** - rapid breathing; is one symptom of respiratory distress

45) ***Thoracic Aortic Aneurysm*** - dilation of a main blood vessel in the chest cavity

46) ***Tourniquet*** - a bandage wrapped tightly around an extremity used to slow or stop bleeding/blood loss

47) ***Toxic*** - poisonous

48) ***Trauma*** - an injury (physical, emotional or psychological) inflicted by some violent event or other external force

49) ***Venous*** - of or pertaining to the veins

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Summary

This unit has given you the basic medical knowledge that you must have in order to successfully understand and deal with the medical issues that you will face on a daily basis. The information given to you in this unit is basic information. All descriptions and/or definitions are generic. They are not strict medical definitions.

This unit will help prepare you for using the EMDPRS that you will be taught in Module 3. Before you get to that point though, you need to learn how to get information from the people who call you. **Module 2, Information Gathering and Dispatch** teaches you how to do this.

MODULE 2
Information Gathering and Dispatch

MODULE OVERVIEW

Effective Emergency Medical Dispatch requires that you be able to successfully obtain information from callers, allocate and dispatch resources and, finally, be prepared to provide effective emergency care instructions.

Module 2, Information Gathering and Dispatch, presents information and methodology for eliciting required information from callers. It also provides training for resource allocation. Finally, there is a unit developed to help you understand how to properly provide the emergency care instructions found on the locally approved Emergency Medical Dispatch Protocol Reference System (EMDPRS).

Module 2 contains the following Units:

Unit 1:	*Obtaining Information from Callers*
Unit 2:	*Resource Allocation*
Unit 3:	*Providing Emergency Care Instructions*

MODULE OBJECTIVES

Upon completion of this module, you will be able to:

1. Describe the philosophy of Emergency Medical Dispatch call taking.
2. Describe the techniques for obtaining information from callers.
3. Describe the local EMS system.
4. Describe how to properly allocate resources.
5. Describe the proper ways to provide emergency care instructions.

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UNIT OVERVIEW

Dealing with difficult callers by sending resources out and having them determine problems is not acceptable behavior. One of the most important parts of your job is obtaining information from callers in order to determine emergency medical needs.

Unit 1, Obtaining Information from Callers, identifies the philosophy of Emergency Medical Dispatch and your responsibilities when dealing with callers. It also points out the interpersonal qualities that must be brought to each call and provides a series of events that you can predict will happen with each real emergency.

This unit also shows the correct method of doing the initial caller assessment and the proper order that information should be taken from callers. How to calm hysterical callers in order to get that information is also presented.

UNIT OBJECTIVES

Unit Learning Objectives

Upon completion of this unit, you will be able to:

1. Describe the philosophy of Emergency Medical Dispatch call taking.
2. Describe the techniques for obtaining information from callers.

Enabling Learning Objectives

To meet the unit learning objectives, you will:

1.1 List the primary responsibilities of the EMD when call taking.

1.2 Describe the interpersonal qualities and attitude that the EMD is required to show at each call.

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MODULE 2 - UNIT 1
Obtaining Information from Callers

2.1 List in order of priority the four essential items of information that the EMD must obtain from each caller who requests EMS assistance.

2.2 Given simulated calls, and using local reporting forms, accurately obtain and record essential information from callers in the correct priority sequence.

THE PHILOSOPHY OF EMD

EMDs have many responsibilities. In addition to learning about the basics of EMD and getting the medical knowledge required for successful Emergency Medical Dispatch, it is important that you learn about the other responsibilities that you will have. One way to do this is to learn and understand the basic philosophy of Emergency Medical Dispatch. This philosophy includes learning the basic responsibilities of an EMD, the interpersonal qualities that must be shown at each call, attitude and proper ways to use the telephone.

Basic EMD Philosophy

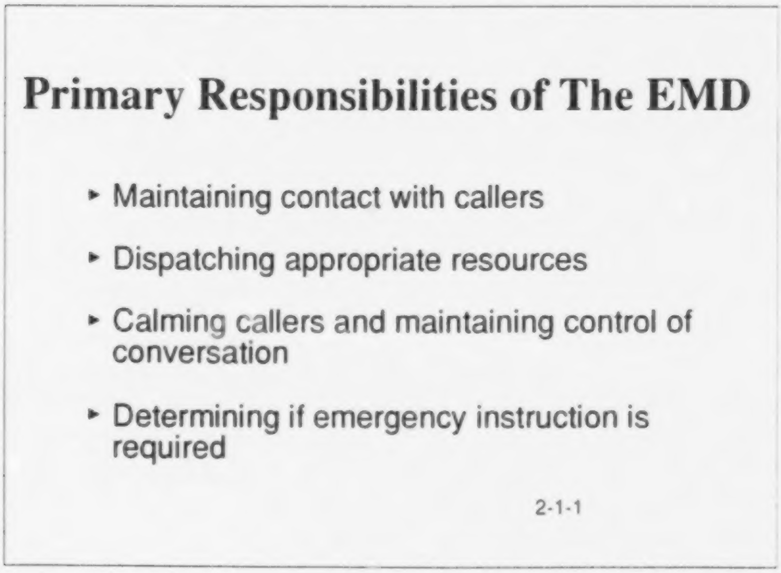
Four Primary EMD Responsibilities in Call Taking. The EMD has many responsibilities. Some of these were described in Module 1, Unit 1. Of these, the following four are considered to be the key responsibilities of the EMD.

1) *The EMD is responsible for maintaining contact with the caller.* It is up to you to keep the caller on the line until you get the information you need to make a dispatch decision.

2) *The EMD is responsible for dispatching the appropriate units.* While you may think this is obvious, it still is very important. Once you have the information needed to dispatch, you need to initiate the dispatch. What you need to dispatch is determined by the EMDPRS and the responses you get from the caller.

3) *The EMD must keep the caller calm and maintain control of the conversation.* In other words, if you can't calm the caller and keep them under control, you won't be able to get the information you need to make good dispatch decisions.

4) *The EMD must determine if emergency care instructions are required.* Simply, you must decide if there is a need for you to use a scripted medical protocol like CPR or Mouth-to-Mouth Resuscitation. This decision is determined by your locally approved EMDPRS. The EMDPRS will tell you when you need to give emergency care instructions.



Primary Responsibilities of The EMD

- Maintaining contact with callers
- Dispatching appropriate resources
- Calming callers and maintaining control of conversation
- Determining if emergency instruction is required

2-1-1

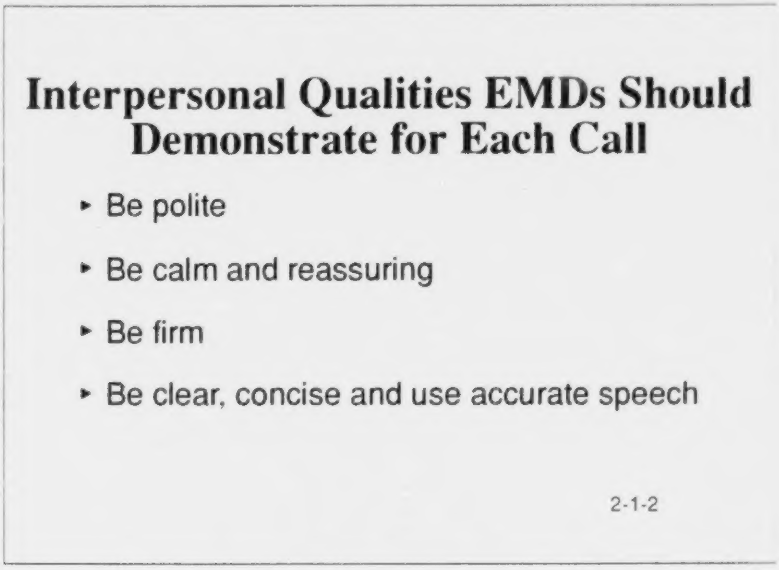
Four Interpersonal Qualities You Should Display During Every Call. Every caller you speak to should be treated professionally, regardless of the personal demeanor or any experience that you may have with them. There are four qualities that you need to display for EVERY caller.

1) *Be polite.* Treat every caller with respect and courtesy.

2) *Be calm and reassuring.* You need to calm the caller in order to get the information you need to make dispatch decisions. Reassuring them that you want to help them can help you calm them and keep them calm.

3) *Be firm.* You need to maintain control of the call. The best way to deal with difficult callers is to handle them firmly. Just be careful not to become impolite in the process.

4) *Be clear, concise and use accurate speech.* Don't confuse callers by using jargon or difficult terms. Try to speak in a clear voice (so the caller can hear every word). Try to keep your questions, comments, etc. short and to the point. If you dispatch units to respond, tell the caller that help is on the way and will be there soon, don't just tell the caller they're on the way. However, do this ***ONLY*** after you have dispatched assistance to the caller.



Interpersonal Qualities EMDs Should Demonstrate for Each Call

- Be polite
- Be calm and reassuring
- Be firm
- Be clear, concise and use accurate speech

2-1-2

Proper Telephone Techniques. When you are on the phone with callers, you are in one of the most difficult situations that you will face. Proper use of the telephone helps you better deal with this situation. Below are some telephone techniques that you can use. Using them will make your job easier.

1) *Ask the caller if they have a cordless phone.* Have them get the phone as close to the patient as possible. Have them use a cordless phone if one is available.

2) *Speak directly into the mouthpiece.* The caller can hear you better and you won't have to repeat yourself as much. Maintain a calm tone of voice, even when callers don't understand you. Don't speak louder!

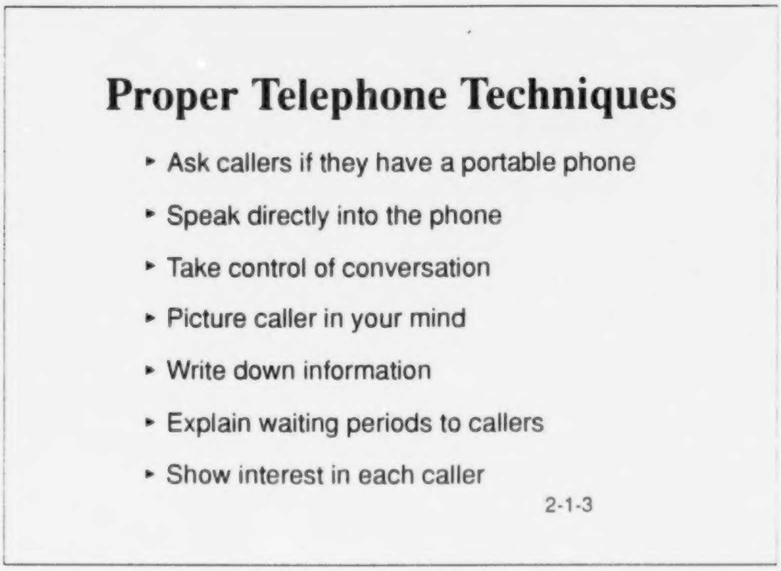
3) *Take control of the conversation.* Don't let callers ramble. Direct and focus their attention to answering your questions. Otherwise you waste precious time.

4) *Picture the caller in your mind.* Trying to imagine what is happening at the scene will help you better deal with the caller. It helps to personalize the call.

5) *Document information callers give you.* Note what callers are saying. This way you can relay it to responding units if it is necessary.

6) *Explain waiting periods to callers.* Callers who are waiting for your help are very anxious to begin with. Long periods of silence exaggerate their feelings of fear. Explaining waiting periods helps to prevent or slow the effects of a phenomenon known as "telescoping of time" where things seem to be taking longer than they really are.

7) *Show interest in each caller.* Treat them as you would your own family. Ask for the caller's name and use it frequently and repeatedly during your conversation. This keeps callers focused and is likely to help calm them. Personalizing the call in this way also helps callers realize that you are concerned and want to do what's best for them and the person they are calling about.



Proper Telephone Techniques

- Ask callers if they have a portable phone
- Speak directly into the phone
- Take control of conversation
- Picture caller in your mind
- Write down information
- Explain waiting periods to callers
- Show interest in each caller

2-1-3

Your Attitude. Following is a discussion about the attitude that you will need to display during each call. Having the proper attitude helps you deal with the people who request your assistance.

1) *You need to be calm and reassuring.* Remember it is your job to calm and reassure the caller, especially in cardiac cases. If you aren't calm then the caller won't be either. Also, let the caller know you've done something to help them ("I've dispatched the ambulance and they'll be there very soon...").

2) *Be alert to caller responses.* Listen carefully to what the caller tells you and write the responses.

3) *Be willing to give medical instruction to callers.* The medical information and training you receive in this course is designed to help patients, not hurt them.

4) *You need to be quick.* You need to quickly determine the location of the patient/caller and nature of the emergency being reported. Ask one question at a time and record the answer. Only repeat a question if a caller hasn't understood you or has not provided the information you need to answer your question.

☛ Use the questions contained in your protocol. This does not mean you cannot ask additional questions, provided they do not delay dispatch.

5) *You need to be clear.* Speak slowly and clearly so that you don't have to repeat instructions or questions.

6) *Act and sound confident.* Your confidence reassures callers and increases the likelihood that the caller will follow your instructions.

EMD Attitudes

- Calm and reassuring
- Alert to caller responses
- Willing to give medical assistance to callers
- Quick
- Clear
- Sound and act confident

2-1-4

Eliciting and Recording Information/Conducting the Initial Assessment

Asking the right questions, in the right way, getting the right responses and documenting them are some of the most important parts of your job. Experience has shown that using the EMDPRS is a more reliable method for obtaining the information you need to make a dispatch decision than simply asking the caller what is wrong.

Conducting the initial assessment is done the same way, every time. The procedures and questions you use are given to you in your EMDPRS, but the following information should always be gathered in the sequence presented here. Gathering and recording this information is the "initial assessment." The proper order that information should be gathered is Where, What, How, Who and When. ***The order is very important.***

Where? *Get the address first.* You need to find out where the incident happened (or is happening). This way you know where to send units and can help them get there efficiently. ***Do this even if you are using an E9-1-1 system or CAD (computer aided dispatch) terminal.*** You need a means of verifying patient and caller locations. This is important in case you and the caller get disconnected and you can't reestablish contact. At least you'll be able to get ***some*** help out to the patient. *Get the phone number* (aka, "call-back" number). This way you can call back should you and the caller be disconnected.

NOTE: On some 9-1-1 enhanced systems (9-1-1-E) the address and phone number of the caller is automatically supplied. You must confirm that this information is correct.

What? Find out what the *chief complaint* is and the nature of the problem. Get information about what has happened and what response is needed. At this point you will also *determine the level of consciousness* ("Is the person awake?", "Can the person answer questions?", etc.) and *determine breathing status* (looking for respiratory distress and cardiac arrest). It is at this point that you must take control of the call and do not let the caller ramble.

How? Obtaining this type of information is generally optional, and is frequently offered directly by the caller ("My friend was shot," "He stabbed me," "My friend got stung by a bee and now I can't wake him up"). However, it may be included in the questioning sequence of your EMDPRS. Knowing how an injury occurred (sometimes referred to as the "mechanism of injury") can provide some valuable insight into the response required, even scene safety issues.

Who? This information is generally optional. Here you get information about who the caller is and who needs help. This information can be useful in helping you modify your dispatches (only if the EMDPRS says to based on this information) and can be useful for the responder you dispatched.

When? Get information about how long ago the incident happened. This information also can help you modify the response and can be useful to responding personnel.

Conducting Initial Assessment

▸ WHERE?	Get locational information
▸ WHAT?	Identify medical nature
▸ HOW?	Cause of injury
▸ WHO?	Identification of patient
▸ WHEN?	Timeframe of when event occurred

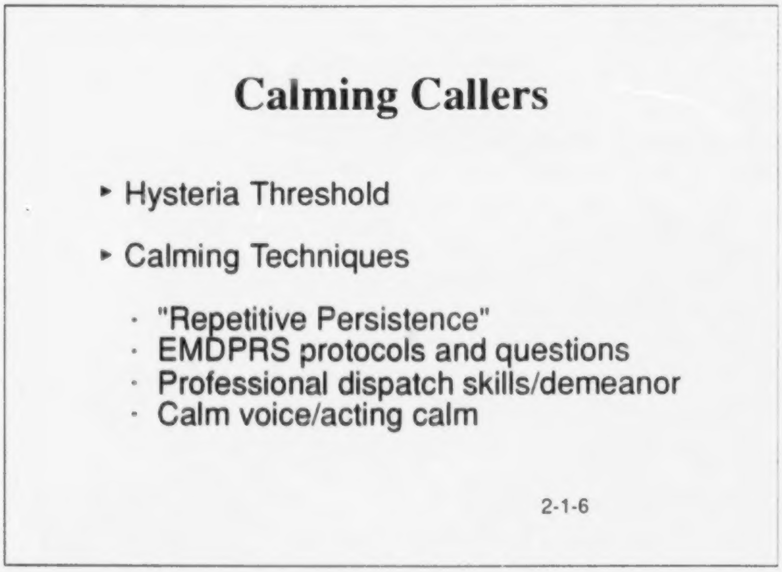
Calming Callers

A person who makes a call for emergency medical assistance may be upset and anxious. It may be difficult to elicit information from an hysterical caller. Therefore, it is best for all people involved that you be able to calm the caller. There are techniques that you can use to calm these callers.

Calming Techniques and The Hysteria Threshold. There is a phenomenon that occurs with emergency situations that you need to understand. It is commonly referred to as "The Hysteria Threshold." The hysteria threshold is defined as *"the caller's emotional state that prevents them from being focused in the interrogation process."* Simply put the hysteria threshold is when the caller reaches a point that s/he is too upset to properly focus on your questions and therefore cannot give you the responses you need to make your dispatch decisions.

Until you can break through a caller's threshold, there is no way you can control the call. The most effective way to break through the hysteria threshold is through the use of a techniques know as *"repetitive persistence."* Repetitive persistence *"is a command or request from the EMD to the caller, accompanied by a reason for the request. The request or the reason is repeated verbatim until the request or action is carried out by the caller."*

Other ways to control the hysteria threshold are by using the medically approved interrogation protocols found in your EMDPRS and using your professional dispatch skills (professional demeanor makes callers more comfortable with you). Be sure to ask for and use the caller's name throughout the duration of the call. Far and away, the most effective methods are a calm tone of voice and a calm demeanor.



Calming Callers

- Hysteria Threshold
- Calming Techniques
    - "Repetitive Persistence"
    - EMDPRS protocols and questions
    - Professional dispatch skills/demeanor
    - Calm voice/acting calm

2-1-6

NOTE: It is important that you remember that most calls you receive are not life-threatening.

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Special Problems. In the course of your career as an EMD, you will run into several situations that are particularly difficult to deal with or pose unique problems. Several of these situations are described below. Methods for dealing with them are also provided.

1) *Simultaneous emergencies.* There will be times when you will get more than one emergency call at a time. In this type of situation, it is best to take good notes and prioritize calls in terms of medical urgency (according to your EMDPRS).

2) *Confusing information.* To combat this, write down all information. If you become confused, repeat the information you have to the caller for them to verify. Remember to get a "call back" number in case you need to further verify locational information, and get the address of the *incident*, not of the caller. (Make sure you let the caller know you need to know where the victim is!)

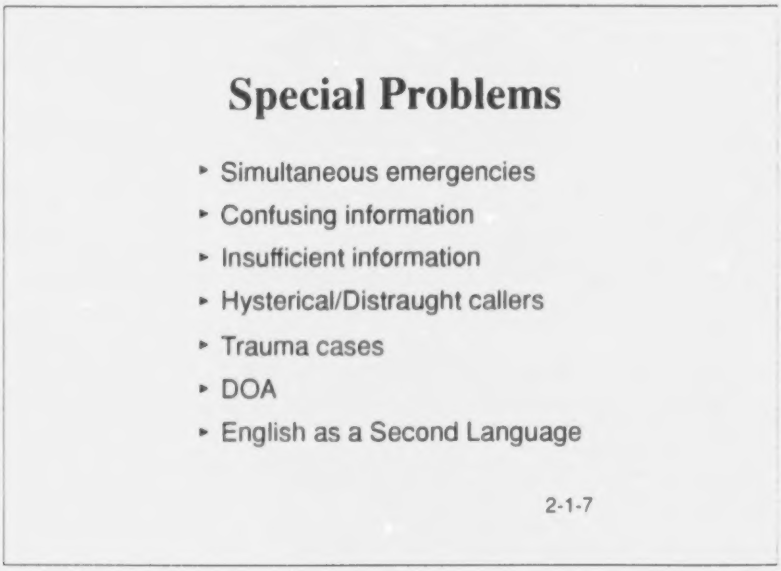
3) *Insufficient information.* If after dealing with a caller, you find that you don't have enough information, or the responding personnel need further information, then you need to be able to reach the caller, so get a "call back" number (taken care of in some enhanced 9-1-1 phone systems). Using the EMDPRS interrogation procedures will also help prevent this.

4) *Hysterical/distraught callers.* These can be the most challenging calls. Remember the procedures you just learned for controlling the hysterical caller. Be firm and courteous and get the caller's attention. If possible, ask to speak to someone else. Be sure you tell the caller to stay on the line until you say it is okay to hang up. You will find that callers' emotional states will generally improve once you start giving them medical instruction.

5) *Trauma cases.* USE EXTREME CAUTION. Additional movement of the victim may cause further injury.

6) *Dead On Arrival (DOA).* Different regions have different policies regarding DOAs. Check with your local medical control about your policies.

7) *English as a second language.* Callers whose primary language is not English, or those with a poor command of the language, may not be able to respond properly to instructions. Judgment on a caller's ability to follow instructions can be determined during the interrogation process. In most places, access to language translator services are available (like that available from AT&T). If you are in doubt about caller responses, however, it is best to send a response higher than you can prove is necessary based on the information you have from the caller. **Refer to your local guidelines.**



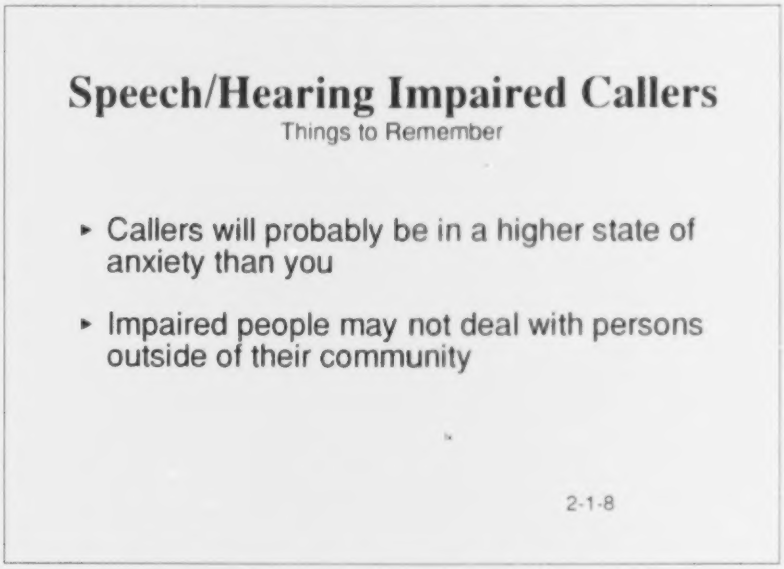
Special Problems

- Simultaneous emergencies
- Confusing information
- Insufficient information
- Hysterical/Distraught callers
- Trauma cases
- DOA
- English as a Second Language

Speech/Hearing Impaired Callers. Make every effort to assist these callers and remember that call times are greater with persons having these disabilities. It is important that you respond with patience due to the problems that you may encounter in communicating with these callers.

Remember, the caller will probably be in a higher state of anxiety than you. Also keep in mind that these people usually don't deal with people outside of their own communities, so they may not know how to effectively communicate with you.

Impaired persons may not frequently deal with persons outside of the deaf community. Therefore they might be reluctant to request emergency services and wait longer to ask for help. In this situation, the request becomes more urgent.



Speech/Hearing Impaired Callers

Things to Remember

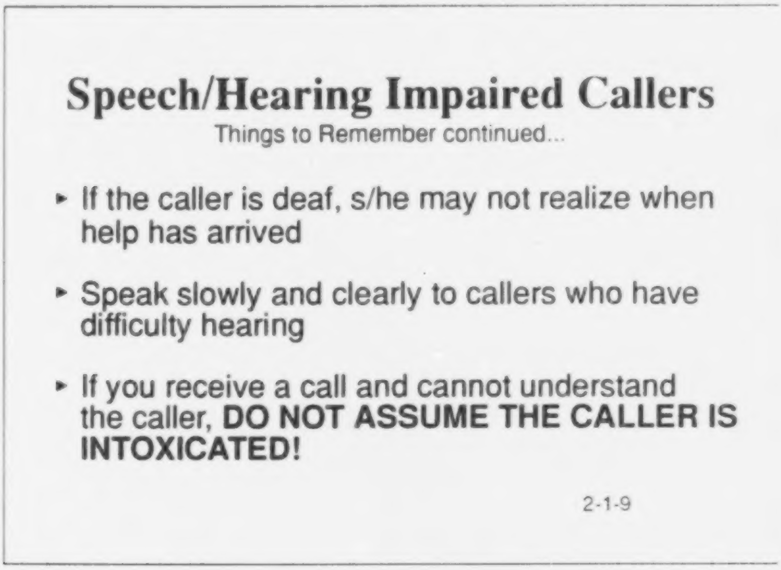
- Callers will probably be in a higher state of anxiety than you
- Impaired people may not deal with persons outside of their community

2-1-8

If a caller is deaf, he or she may not realize when help has arrived. It is critical that you stay on the line with them until help has arrived and provide them with continuous updates. It may also become necessary for you to interpret for the responders. Actual protocols to follow will be set by your local agency.

Speak slowly and clearly to callers who have difficulty hearing. DO NOT TALK DOWN TO THEM. They are *able* to understand what you tell or ask them, they just can't *hear* you very well.

If you receive a call and you cannot understand the caller very well, do not assume that person is intoxicated. The caller may have a speech impediment, be suffering a stroke or could be a diabetic with low blood sugar. Ask them to slow down and remain patient. Tell them you will remain on the line with them for as long as it takes to get them the appropriate response. You may want to repeat what you hear to them, so they can tell you if it is correct.



Speech/Hearing Impaired Callers

Things to Remember continued...

- If the caller is deaf, s/he may not realize when help has arrived
- Speak slowly and clearly to callers who have difficulty hearing
- If you receive a call and cannot understand the caller, **DO NOT ASSUME THE CALLER IS INTOXICATED!**

2-1-9

NOTE: Review the local TDD call procedures and policies with your instructor. He or she will discuss your local policies at this point in the course. Feel free to ask them questions.

The Americans With Disabilities Act. By requirement of the Americans with Disabilities Act of 1990, as of January 26, 1992, all public entities providing emergency telephone services have been required to be accessible to persons with severe speech or hearing disabilities.

Children Callers. Most of the calls you will handle as a dispatcher will be from adults concerning adults. Children are involved in only a small number of EMS runs. It is not known how often EMD calls are made by children as callers. However, as both caller and victim children's medical complaints are specific and different issues from adults'. Criteria-based dispatch and pre-arrival instructions derived from and designed for adult symptoms and conditions may not match well with the underlying causes of those symptoms in children. One example is that, in children, chest pain or fainting are rarely due to a primary heart problem.

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Injury is the most common cause for both adults and children to place calls for 9-1-1 assistance. They make up from one-half to two-thirds of all pediatric ambulance runs. Although meningitis, dehydration and other causes of medical shock are common reasons for children to be brought to an emergency room, children with these problems are more often brought by lay transportation or from the pediatrician's office without calling for EMS assistance. Respiratory distress and seizures make up the other half of calls for assistance for children.

It can be difficult to tell whether a child is having an emergency or not. The younger the child, the more vague or nonspecific may be the signs of illness; irritability, crying, vomiting, fever and lethargy are symptoms that may accompany a wide range of pediatric conditions; many trivial, some life-threatening. For instance, while chest pain, collapse, and loss of consciousness are the common adult medical complaints that are considered potentially life-threatening, the pediatric complaints are likely to be "sick," "fever," "unresponsive," "choking," "seizing" or "hurt".

Behind the complaint "something is wrong with my child" ("sick, hurt, crying") may be an unsuspected foreign body in the esophagus, meningitis, child abuse or simply an ear infection. Behind the complaint, "my baby had a spell where he was blue, pale, not breathing, unresponsive..." may be something as simple as regurgitation or as complex as seizure, heart rhythm disturbance, apnea or septic shock. Because a child's symptoms are often nonspecific, even an experienced pediatric provider will have difficulty discriminating between these conditions in person, let alone over the phone.

Most of the calls you receive concerning children will be from their parents or other caregivers. Although parents are discerning and detailed observers of their children, they are not often medically trained. Furthermore, parents are emotionally entangled in their child's condition in ways that limit their abilities as EMS providers. Whether or not they have contributed to their child's condition, parents are likely to feel guilty and may also feel angry, frightened or powerless by what is happening to their child.

Because of this, getting information and providing instructions may be difficult. Your ability to provide calm and clear instructions will make it much easier to get information, particularly if your questions are framed within the context of providing the help they seek. In an emergency, questions can be best posed in the context of providing what they need and telling them how they can help, in a calm fashion. "I am sending help, and I will stay with you until help arrives. Listen carefully, you can help by telling me....." The toddler or child's level of activity can sometimes be the most helpful gauge on the urgency of the situation. Asking "How is the child now?" or "What is the child doing now?" can help the parent give you a better picture of what is happening at the moment.

All of these considerations contribute to the difficulty of telling whether a child is having an emergency or not. Because of these considerations, over-triage is a standard strategy practiced by pediatricians, nurse practitioners and family practitioners. Triage of pediatric patients by EMD should reflect this understanding.

Critically ill or injured children benefit from receiving care at facilities with specialized resources for caring for children. These facilities may not be the nearest hospital to the site of injury, therefore consideration for developing and supporting a system of care for children that gets the injured or ill child to the right facility as quickly as possible should be built into dispatch protocols and may involve factors such as helicopter or fixed wing transport and pre-existing triage and transfer agreements, both intra and interstate.

Finally, providing emergency care for children can be distressing even for the most experienced of EMS personnel, particularly if the outcome of the crisis is poor. Critical incident stress management for such events is increasingly acknowledged to be of great help.

There will be times when you get a call from a child. Below are a few special things to consider when dealing with children callers.

1) Children, when faced with a crisis, often appear to be very calm; this is because they generally do not understand the gravity of the situation. Remember, you should not judge the severity of the call by the level of emotion expressed by the caller.

2) Children often will report "something is wrong with my..." or "...is sick and needs help."

3) Children will commonly refer to someone who is unconscious as "it looks like...is asleep" or "...is sleeping and I can't wake them"; assume this is an unconscious patient.

4) Children are very capable of answering questions and following instructions. You just have to ask them one-at-a-time so you don't confuse the caller. It may be necessary to repeat and rephrase your questions in order to simplify it for the child ***and*** to be sure the child is not answering "yes" out of reflex to an authority figure.

5) Children callers often get anxious or nervous when it seems to be taking too long for an ambulance to arrive. You have to continually reassure them that help is coming.

6) If distressed, the child's anxiety may relate to concern about who will take care of them or fear that they might be responsible for the crisis. Remember to reassure them that they will be taken care of and to praise them for their help in making the right call.

7) In non-English speaking families, the school-aged child may be the most fluent in English and may have been chosen to be the translator. Always ask if there are any other adults present.

Common Sequence of Events. There is a common sequence of events that you will face when dealing with callers. This sequence is listed and described below. All of these can be overcome using repetitive persistence and the other techniques you have learned up to this point.

1) The caller objects to being questioned.

   a) Upon answering a call, the caller may object to being interrogated. They may think you're trying to quiz them on their EMS knowledge!

   b) Tell the caller you're going to help them. Explain to the caller that you are asking all these questions because you need to know what is happening so you can send the proper resources.

2) The caller reaches the "hysteria threshold."

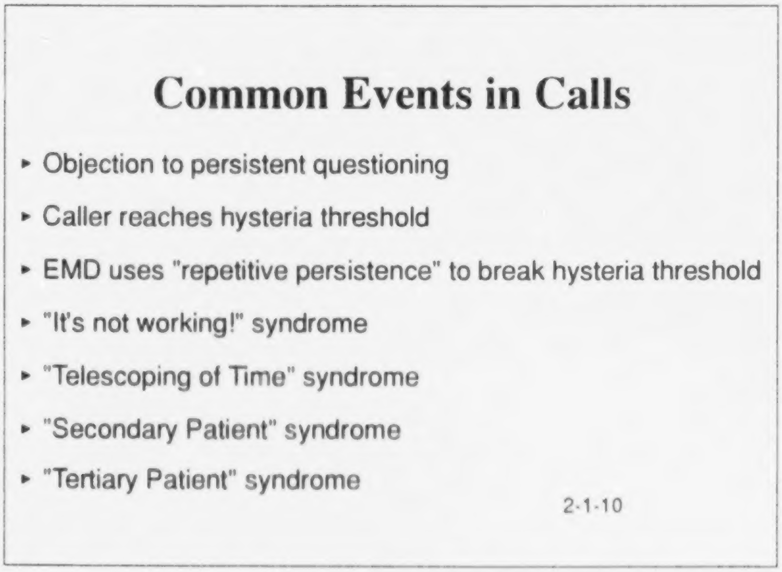
3) You use "repetitive persistence" to break through resistance and overcome the caller's "hysteria threshold."

4) Some events that may cause recurring hysteria in callers are provided below.

   a) *"Recurrent Hysteria" syndrome.* After calming down enough to talk to the EMD, the caller is told to get the phone as close to the patient as possible. When once again faced with the seriousness of the situation, the caller may become hysterical again.

b) *"It's not working" syndrome.* This happens when the caller panics at failure of initial attempts at resuscitation.

c) *"Telescoping of time" syndrome.* This happens when the caller panics because he or she perceives that events are taking longer than they should. The perception is that the responders aren't coming, and the caller may insist to you that "They aren't coming!"

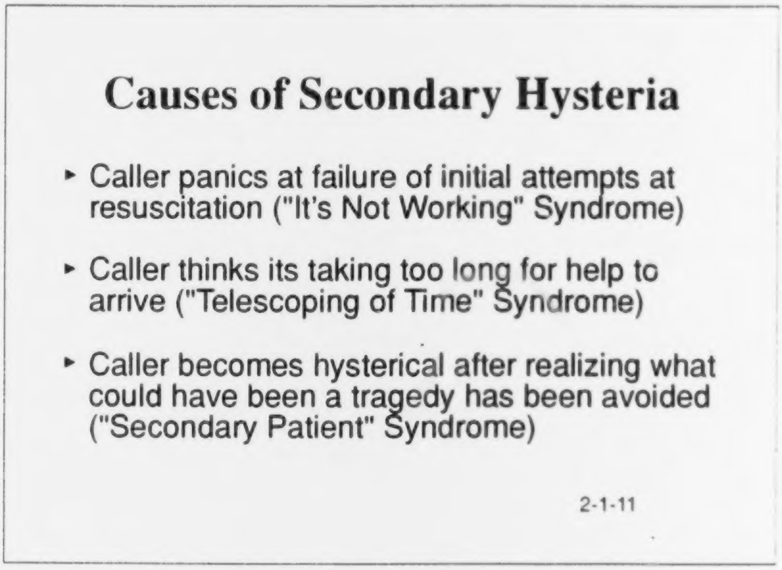


Common Events in Calls

- Objection to persistent questioning
- Caller reaches hysteria threshold
- EMD uses "repetitive persistence" to break hysteria threshold
- "It's not working!" syndrome
- "Telescoping of Time" syndrome
- "Secondary Patient" syndrome
- "Tertiary Patient" syndrome

2-1-10

d) *"Secondary Patient" syndrome.* This happens when the caller realizes that what could have been a tragic outcome has been avoided. The caller then breaks down emotionally from the strain and realization of what could have happened.



Causes of Secondary Hysteria

- Caller panics at failure of initial attempts at resuscitation ("It's Not Working" Syndrome)
- Caller thinks its taking too long for help to arrive ("Telescoping of Time" Syndrome)
- Caller becomes hysterical after realizing what could have been a tragedy has been avoided ("Secondary Patient" Syndrome)

2-1-11

e) *"Tertiary Patient" syndrome.* This is what may happen to you. After dealing with a particularly stressing call, you may feel physically and emotionally drained. This is due to the probability that you have personalized the call and have become emotionally involved in the outcome. It is important to know that there are probably some resources you can turn to when this happens (friends, family, coworkers, and agency stress management resources). It happens to all EMDs; just understand that help is available.

Summary

This unit presented you with the information you need to know to get information from callers so that you can make an effective dispatch decision. You have learned about telephone techniques and how to calm hysterical callers. You now understand how to conduct an initial assessment, and how to handle some of the unique situations that you may run into in your career.

In the next unit you will learn about resource allocation. You will be trained on EMS systems and will learn about your local EMS system. Also, you will learn how to allocate resources in general and within your system.

033

UNIT OVERVIEW

After receiving calls and determining the proper response levels for the calls, EMDs must allocate resources for those calls.

Unit 2, Resource Allocation, presents the basic structure of the local EMS system and general information regarding resource allocation. You will also learn about the resources available in your local system. You will be presented with information regarding general response categories and the principles of successful resource allocation.

UNIT OBJECTIVES

Unit Learning Objectives

Upon completion of this unit, you will be able to:

3. Describe the local EMS system.

4. Describe how to properly allocate resources.

Enabling Learning Objectives

To meet the unit learning objectives, you will:

3.1 Describe the resources available in the local EMS system.

3.2 Describe local pre-configured response modes.

4.1 Determine the appropriate resources to be allocated by considering such factors as:

4.1.1 the nature of the problem;

4.1.2 personnel and vehicles available;

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4.1.3 vehicle proximity to the patient;

4.1.4 ambulance coverage zones and

4.1.5 the types of equipment and trained personnel carried by each resource.

RESOURCE ALLOCATION

Resource allocation is one of the most important functions of an EMD. It demands an in-depth knowledge of the local EMS system and a complete understanding of the philosophy of effective dispatch.

This unit trains you to understand your local EMS system, from its basic layout to its standard and alternate resources. You will learn to identify each type of resource and its capabilities as well as what it takes to properly allocate resources. Finally, you will also learn about response categories.

Successful Resource Allocation

Objectives in Allocation. EMDs must first consider predetermined response configurations and modes for the local area where they work. Allocation of resources depends on your ability to accomplish a specific set of objectives. Your objectives are to:

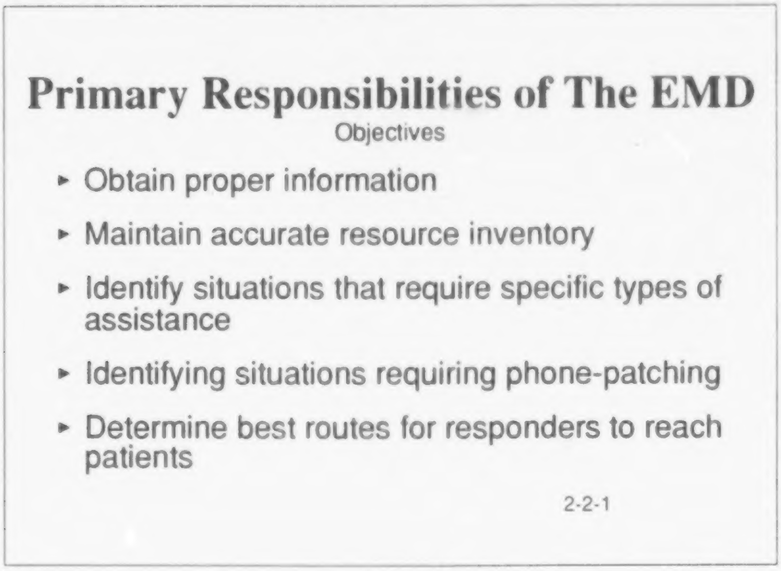
1) *Obtain the proper information.* By using the local EMDPRS, you can get the information you need for effective resource allocation.

2) *Maintain an accurate resource inventory.* You need to keep up-to-date records on the resources available to you.

3) *Identify situations that require specific types of assistance (HAZMAT, High-rise rescue, etc.).* The EMDPRS will help you identify these.

4) *Identify situations requiring phone-patching.* Specific situations like crisis-intervention and poison-control calls may require you to do this.

5) *Determine the best routes for dispatched resources to follow to reach a patient.* This comes from a thorough knowledge of the community in which you work. It is your job to get this familiarization.



Primary Responsibilities of The EMD

Objectives

- Obtain proper information
- Maintain accurate resource inventory
- Identify situations that require specific types of assistance
- Identifying situations requiring phone-patching
- Determine best routes for responders to reach patients

2-2-1

6) *Be familiar with local resource capabilities.* Knowing what each resource is capable of is very important in helping you decide who to send.

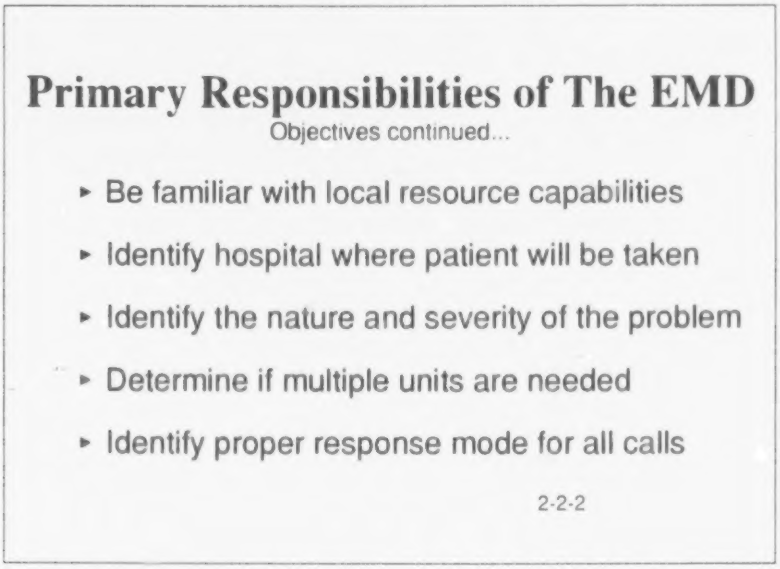
7) *Identify the hospital where a patient will be taken.* This allows you to set up communication or telemetry lines, if needed.

8) *Identify the nature and severity of the problem.* Proper interrogation procedures and use of the EMDPRS will help you do this.

9) *Determine if multiple units (or mutual aid) are needed.* This is based on the urgency and severity of the medical situation,

number of patients and location or proximity.

10) *Identify the proper response mode for all calls.* Response modes are preconfigured for you in your EMDPRS for each medical complaint type. Response modes you will usually hear about are "Hot" and "Cold" (more on these later).



Primary Responsibilities of The EMD

Objectives continued...

- Be familiar with local resource capabilities
- Identify hospital where patient will be taken
- Identify the nature and severity of the problem
- Determine if multiple units are needed
- Identify proper response mode for all calls

2-2-2

What does proper allocation depend on? Proper resource allocation depends on a variety of factors. These factors are listed below:

1) predetermined response configurations based on local needs and resources;

2) the type and severity of the emergency;

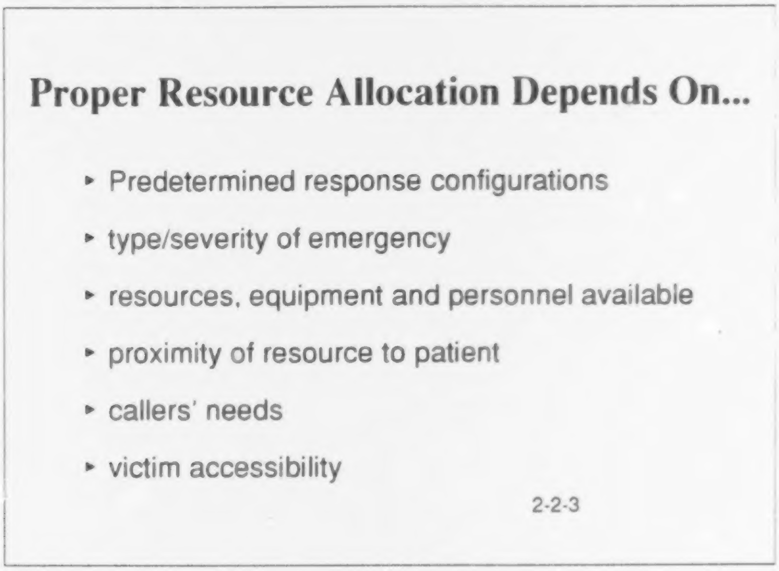
3) the resources, equipment types and personnel available;

4) the proximity of the resource to the patient;

5) response time to the patient;

6) callers' needs and

7) victim accessibility.



Proper Resource Allocation Depends On...

- Predetermined response configurations
- type/severity of emergency
- resources, equipment and personnel available
- proximity of resource to patient
- callers' needs
- victim accessibility

2-2-3

Response Modes and the Four General Predetermined Response Configurations. As you have learned, you decide the response modes for dispatched units. Your decision is based on predetermined response configurations that are listed in your EMDPRS. Your local medical advisor sets up the configurations based on the following things:

1) *Time and Outcome.* Will time make a difference in the outcome? Will getting there faster be that much help to the patient?

2) *Time Savings.* Will time to the patient be reduced by using the "hot" response mode (aka Emergency Response Mode - ERM)? Will using the emergency response mode save time?

3) *Time and Proximity.* Will time be saved by using resources closer to the patient in a normal mode ("Cold")? Would it be faster to use a resource further away but send it in "Hot."

EMDPRS Configurations Based On...

- Time and Outcome
- Time Savings
- Time and Proximity

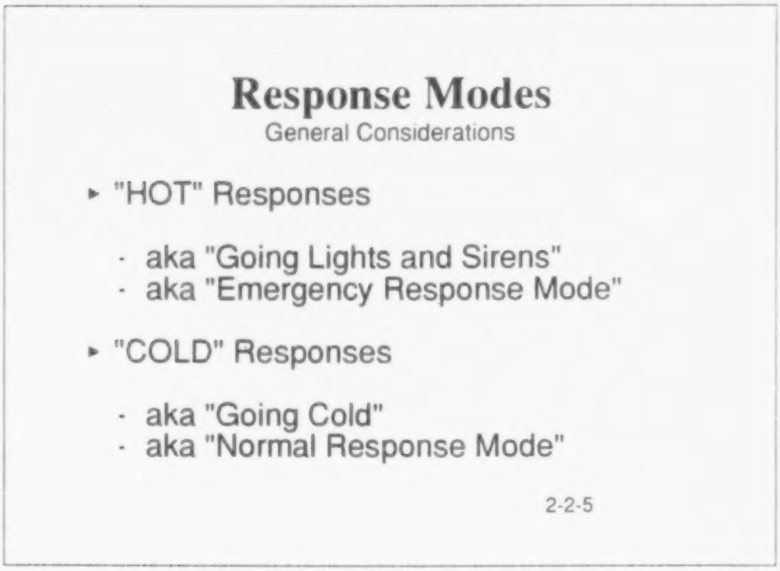
There are two things you need to learn about in order to better understand how to use the configurations found in your EMDPRS. These are: ***response modes*** and ***response configurations***.

There are two types of **response modes**, *"Hot"* or *"Cold."* Earlier in this unit you were told that you'd learn about response modes because you are responsible for using the EMDPRS to properly assign a response mode to a dispatched unit.

1) *"Hot"* responses can be called many things. One popular way to refer to a "hot" response is "going lights and sirens." The *Uniform Vehicle Code and Model Traffic Ordinance* refers to the "Hot" response as the

"Emergency Response Mode." It defines it as an "emergency medical vehicle response using lights and sirens as prescribed in Sections 11-106, 12-214 and 15-111 of the *Uniform Vehicle Code and Model Traffic Ordinance.*"

2) "Cold" responses are also called "going cold." These responses require a normal traffic response. This means the responding units get no special driving privileges, like using their siren or legally exceeding the speed limit in order to reach a patient. It is referred to as the "Normal Response Mode" in the *Uniform Vehicle Code and Model Traffic Ordinance.*



Response Modes

General Considerations

- "HOT" Responses
  - aka "Going Lights and Sirens"
  - aka "Emergency Response Mode"
- "COLD" Responses
  - aka "Going Cold"
  - aka "Normal Response Mode"

2-2-5

Response types and response modes are used by your medical advisor to determine **response configurations**. Because they are determined in advance, they are usually called "predetermined response configurations." All this means is that the type of unit and what response mode it will use has been decided in advance by the medical advisor in conjunction with other EMD advisory personnel. These configurations are based on a resource, its capabilities and personnel and on the time factors needed for the medical complaint. In general, there are four response configurations.

All this means is that the type of unit and what response mode it will use has been decided in advance by the local medical advisor in conjunction with other EMD advisory personnel. These configurations are based on a resource, its capabilities and personnel and on the time factors for the medical complaint. In general, there are four response configurations.

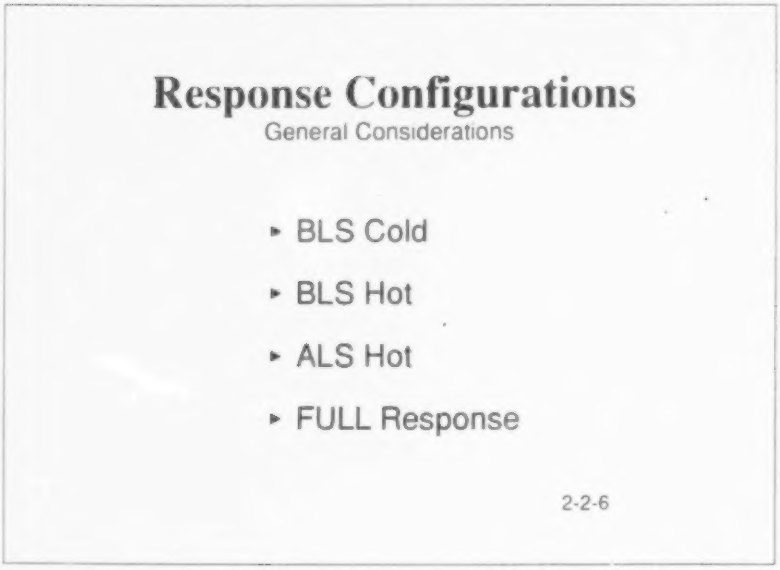
NOTE: Not all areas use these four generic response configurations. Some areas may have more, others less. What is important to remember is that response configurations are determined by local authorities, based on local resources and may differ from agency to agency.

1) *"BLS Cold"* is a resource with basic life support capability dispatched and told to respond in a normal response mode (no lights or sirens).

2) *"BLS Hot"* is a resource with basic life support capability dispatched and told to respond in an emergency response mode (using its lights and sirens).

3) *"ALS Hot"* is a resource with advanced life support capability dispatched and told to respond in an emergency response mode (using its lights and sirens).

4) *"FULL Response"* is when "everything rolls" using the emergency response mode (using lights and sirens).



Response Configurations

General Considerations

- BLS Cold
- BLS Hot
- ALS Hot
- FULL Response

2-2-6

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QUESTION:	What is the difference between a response mode and response configuration? What are the four generic response configurations?

NOTE: Be sure to ask questions about things you do not understand. Remember, not all areas or agencies will use the same terms discussed here. The terms discussed here are just those most commonly used.

Principles of Successful Resource Allocation

When allocating resources, several things determine whether or not you will do so. These things (principles) include the following. Some you may already recognize.

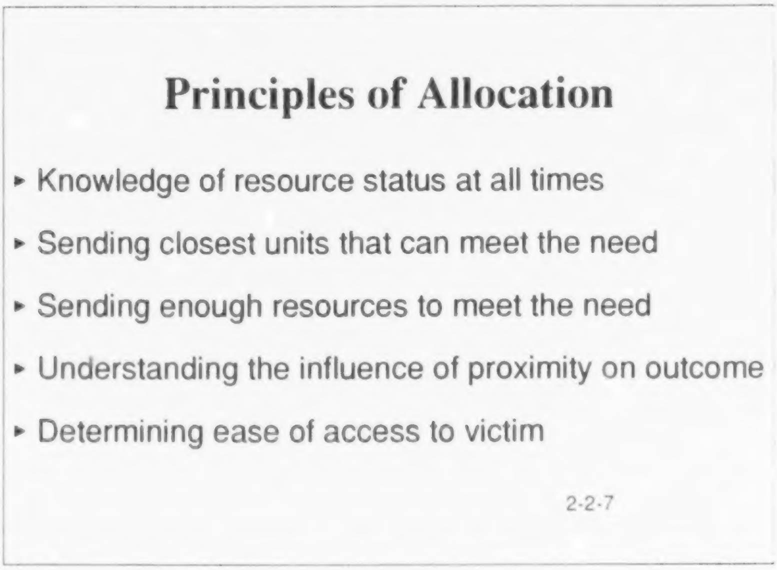
1) *Knowledge of the status of all your resources at all times.* Are they working? Are they in the shop for repair? Is one group out for training, etc?

2) *Sending the closest unit(s) that will meet the need.* Is the nearest unit capable of meeting the patient's medical needs?

3) *Sending the appropriate resources to meet the need.* ALS vs. BLS, Multiple vs. Solitary responders, other resources as available in your local system.

4) *Understanding the influence of proximity and response time on the outcome.*

5) *Determining how easy it is to reach the victim before sending out units.* You need to know if the victim is in an easily accessible place. For example, if the victim is located in a remote ravine after a four-wheeling accident, should you send the two-wheel drive units out? Air ambulance?



Principles of Allocation

- Knowledge of resource status at all times
- Sending closest units that can meet the need
- Sending enough resources to meet the need
- Understanding the influence of proximity on outcome
- Determining ease of access to victim

2-2-7

6) *Knowing the availability of first responders, other agencies and multiple units for quick responses as the situation requires it.* What other resources are available that meet the need?

7) *Having backups for resources that are "out-of-service."* Having additional backup resources are very popular in systems that engage in fluid deployment, system management and station/zone coverage deployment strategies.

8) *Determining need based on clinical/medical criteria found in your EMDPRS.* What exactly **is** the patient's medical need? What does the EMDPRS say?

9) *Using EMDPRS recommendations to determine response configuration and mode.* You will find these recommendations in the EMDPRS. They have been predetermined by your local medical authority to be most effective.

Principles of Allocation

continued...

- Knowledge of availability of first responders, other agencies and multiple units for quick response
- When in doubt, send out more than you can prove you'll need
- Having "backups" for units "out-of-service"
- Determine need based on medical/clinical criteria in EMDPRS
- Use EMDPRS recommendation to determine response configuration and mode

2-2-8

Local Medical Resources

It is up to you to know what medical resources are available in your local EMS system. If you know and understand the medical resources in your area, you will be doing a more effective job of emergency medical dispatch.

There are many resources available. These resources vary from area to area. The resources that you have may or may not be available to another agency or town. Following is a list of some of the more common medical resources:

1) Hospitals;

2) Medical centers, Burn Centers, Trauma Centers, Crisis Centers, Hyperbaric Chamber facilities;

3) Advanced Life Support/Paramedics;

4) Basic Life Support/Advanced Emergency Medical Technicians (EMTs);

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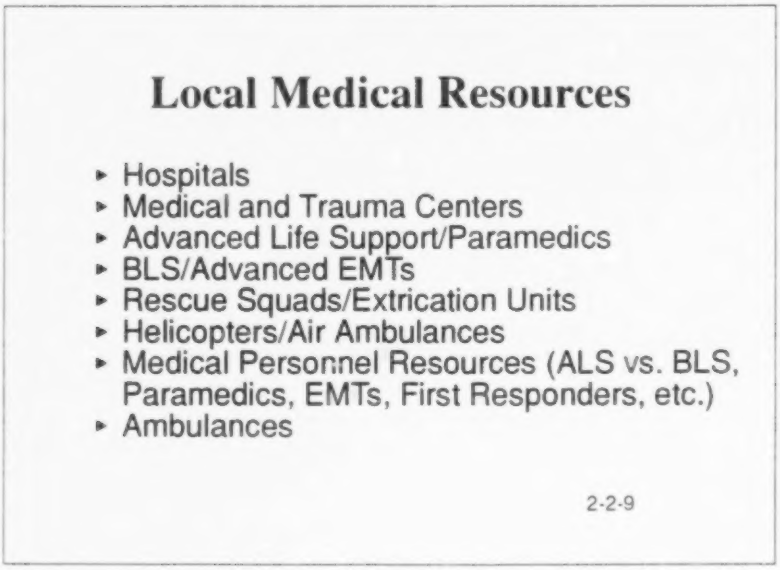
5) Rescue Squads/Extrication Units;

6) Helicopters/Air Ambulances and

7) Ambulances.



Local Medical Resources

- Hospitals
- Medical and Trauma Centers
- Advanced Life Support/Paramedics
- BLS/Advanced EMTs
- Rescue Squads/Extrication Units
- Helicopters/Air Ambulances
- Medical Personnel Resources (ALS vs. BLS, Paramedics, EMTs, First Responders, etc.)
- Ambulances

2-2-9

?

QUESTION: What are some of the resources available in your system? The instructor will review local resources and explain some of their unique capabilities.

Most systems have additional resources to enhance their resource base. These resources are usually considered alternates, because they are not the main resources used but are specialty resources and are used only in special situations. You should be familiar with the resources and procedures to access them, should they be necessary. Some of the more common alternatives are listed below. They include:

1) special care facilities (Burn Centers, Prenatal Units, Psychiatric Centers, etc.);
2) hazardous material resources (HAZMAT);
3) gas and electric utilities;
4) Police and Fire;
5) Poison Control;
6) Sexual Assault Centers/Counselor;
7) Translator Services (provide interpretation of various languages);
8) U.S. Coast Guard and
9) Military Assistance to Safety and Traffic (MAST).

Alternative/Additional Resources

- Special Care Units (Burn Centers, Perinatal Units, etc.)
- Hazardous Materials Units (HAZMAT)
- Gas and Electric Utilities
- Police and Fire
- US National Guard, US Coast Guard
- Poison Control
- Rape Crisis Centers/Counselors
- Translator Services
- Military Assistance to Safety and Traffic (MAST)

2-2-10

Regardless of the resource (standard or alternative), your agency should always have on hand information about the following for each resource:

1) basic and special capabilities of each resource and

2) resource location and status.

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QUESTION: What other types of things should you know about each resource available to you? Discuss these with your instructor and class.

Summary

In this unit you learned about the basic philosophy behind resource allocation. You know what it takes to determine what resources are used and how your medical director came up with the resources you are using. You also learned about the various response modes and response configurations commonly available in EMS systems. You also discussed response modes and configurations used in ***your*** system. Finally, you learned about the common types of resources that are available in many EMS systems and discussed the resources available locally.

In Unit 3, you will learn about the philosophy behind giving medical instructions over the telephone and how to provide those instructions. Also provided will be some helpful "housekeeping hints" that you might want to use to make providing instructions over the phone easier.

MODULE 2 - UNIT 3
Providing Emergency Care Instructions

UNIT OVERVIEW

Once a call has been received and resources have been allocated, it may be necessary for you to offer a caller the opportunity to perform some emergency care procedures. If a caller accepts the offer to carry out telephone instructions, it is up to you to properly give instructions.

Unit 3, Providing Emergency Care Instructions trains you to properly provide emergency care instruction over the telephone. You will be presented with the philosophy behind the provision of emergency medical instruction as well as information on how to carry out that process.

There are also sections on your role in presenting telephone medical instruction and some basic "housekeeping" hints to help you effectively provide emergency care instruction to callers.

UNIT OBJECTIVES

Unit Learning Objective

Upon completion of this unit, you will be able to:

5. Describe the proper way to provide emergency care instructions.

Enabling Learning Objectives

To meet the unit learning objective, you will:

5.1 Describe the philosophy behind providing emergency care instructions.

5.2 List at least six requirements to creating effective communication between the EMD and the caller.

5.3 List the "housekeeping hints" that aid EMDs in the delivery of effective telephone medical instructions.

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THE PHILOSOPHY OF EMERGENCY CARE INSTRUCTION

Though most calls you receive are not life-threatening, you will occasionally find it necessary to give medical instructions to callers. You must therefore be ready to make decisions about which emergency care needs are required based on the information you get from your initial survey of the caller and your EMDPRS.

Background

Emergency Care Instructions. The amount of telephone instruction given by telephone and the responsibility for giving it, will vary from area to area. ***Who*** is responsible is determined by local planning and advisory guidance committees. They also determine what types of instructions can be presented and how they will be presented.

These same advisory committees determine response configurations and modes, resource allocations and policies for response and instructional needs. The EMDPRS is designed to incorporate all of their requirements. Therefore, before any EMD program is set up, these things must be decided.

Why use the EMDPRS? There will be times when you will find it necessary to give callers some lifesaving techniques over the telephone. Because you are not at the scene and have to rely on the caller to give you information, you need to rely on something to help you determine what is happening. That is the purpose of the EMDPRS.

Module 2 - Unit 3

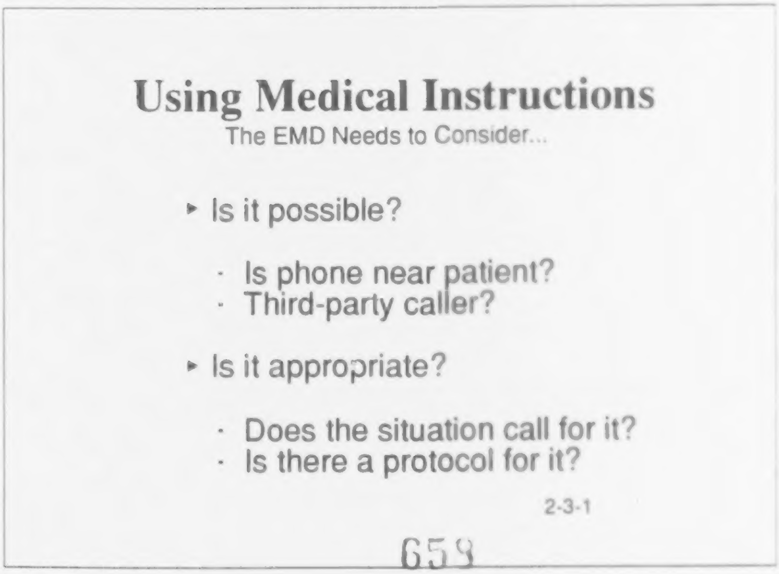
Providing Emergency Care Instructions

The EMDPRS provides interrogation questions designed to help you figure out what is happening medically. It then gives you information about what (if any) resources are to be sent out and if there are any medical instructions the caller may need. If so, the EMDPRS will give them to you. The use of a standardized and medically approved EMDPRS makes giving medical information consistent and accurate. This is because you give callers the same information, in the same manner, every time.

When a situation arises that calls for using medical instructions, you need to consider:

1) *Is it possible?* Is the caller a third-party caller (not with the patient, but reporting from some distance)? Is the phone near the patient? Are there language difficulties (you understand them, they understand you)?

2) *Is it appropriate?* The EMDPRS will tell you if there is any instruction that needs to be given. However, you must decide if it is needed *based on the situation.* In some cases, the responders might get to the patient before the instructions can be given.



Using Medical Instructions

The EMD Needs to Consider...

- Is it possible?
  - Is phone near patient?
  - Third-party caller?
- Is it appropriate?
  - Does the situation call for it?
  - Is there a protocol for it?

Providing Emergency Care Instructions

Some Important Aspects of Providing Emergency Care Instruction. Remember, your role is to gather specific medical information and prioritize responses by using the EMDPRS. To be effective, you must properly carry out three functions:

1) *collect information and question callers;*

2) *dispatch appropriate resources and*

3) *provide pre-arrival and post-dispatch instruction* (when appropriate and possible to do so).

EMDs use the *"All-Caller Interrogation"* protocol to get information from callers, to determine initial dispatch criteria and to find the appropriate card to turn to in the EMDPRS. These labels will vary by the EMDPRS selected for the local agency.

Once you determine which card to use, you should turn to that card. Each EMDPRS protocol card then gives you more questions to ask the caller (more on this in Module 3). The information you get from these questions is used to supplement information you've already collected. These are found in the *"Key Questions"* and *"Additional Information"* sections of the card. They are designed to help you get more information on the following:

1) *additional (and/or clarifying) location information;*

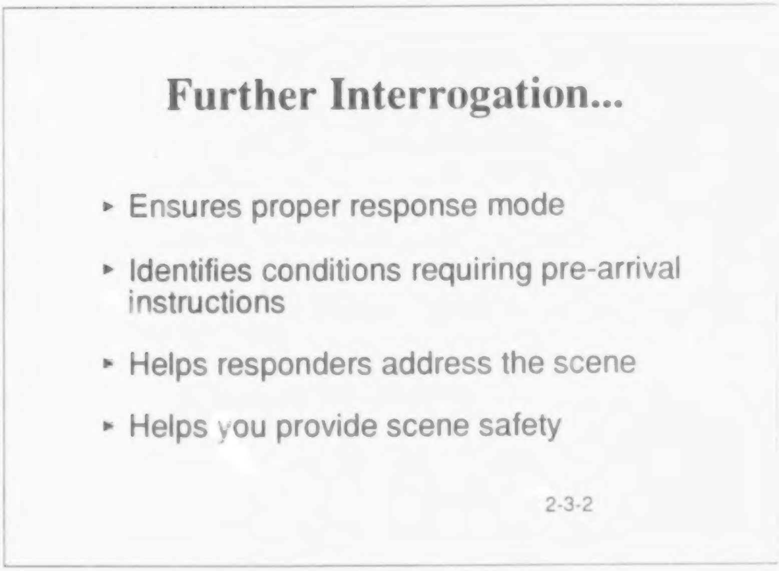
2) *further clarification of the nature and severity of the medical emergency;*

3) *types of pre-arrival/post-dispatch instructions to give;*

4) *determination of additional information that should be relayed to responders;*

5) *ensure determination of the proper response mode;*

6) *identify conditions that require pre-arrival instructions;*



Further Interrogation...

- Ensures proper response mode
- Identifies conditions requiring pre-arrival instructions
- Helps responders address the scene
- Helps you provide scene safety

7) *details to help responders address the scene;*

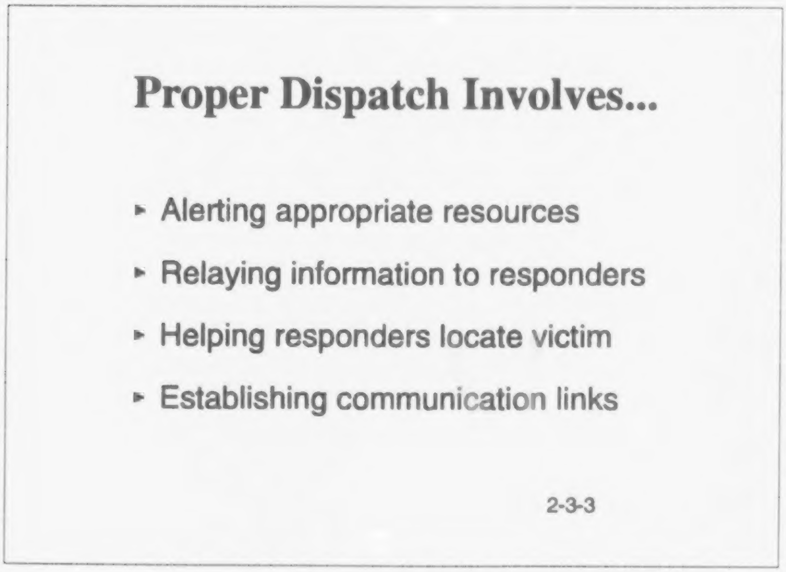
8) *scene safety requirements for responders and bystanders;*

9) *proper resources to alert;*

10) *relaying patient information to responders;*

11) *helping responders locate the victim* and

12) *establishing communication links between the caller and the responders* and any additional resources that may be required (translator services, specialty resources like poison control centers, burn centers, police, etc.).



Proper Dispatch Involves...

- Alerting appropriate resources
- Relaying information to responders
- Helping responders locate victim
- Establishing communication links

2-3-3

?

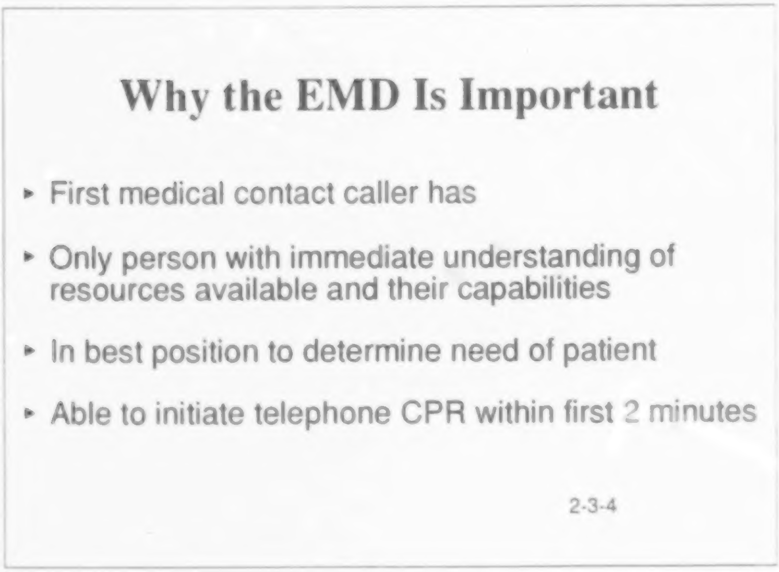
QUESTION? *Why is the EMDPRS important to you in providing medical instruction? How does it relate to proper dispatch and resources allocation?*

Role of the EMD in Providing Telephone Instructions. You are a critical link in patient survival. This is so, because:

1) *you are the first medical contact* that a caller has;

2) *you are in the best position to determine the needs of the patients* and provide appropriate instructions and

3) *you are able to initiate telephone CPR.*



Why the EMD Is Important

- First medical contact caller has
- Only person with immediate understanding of resources available and their capabilities
- In best position to determine need of patient
- Able to initiate telephone CPR within first 2 minutes

2-3-4

There are a few things you need to do to best provide telephone medical instructions. Many of these require preparation before they are actually needed. To be at your best when giving medical instruction, you need to:

1) *refine communications skills;*

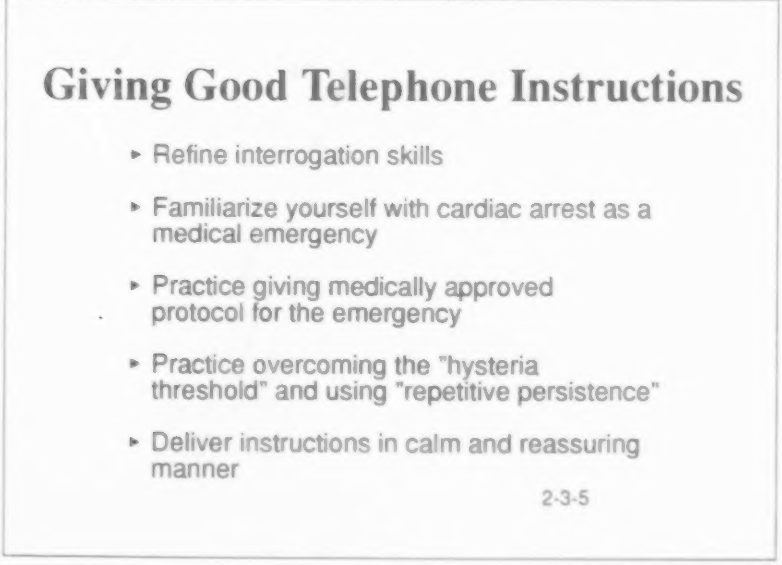
2) *familiarize yourself with cardiac arrest as a medical emergency;*

3) *practice giving the medically approved scripted instructions;*

4) *practice overcoming the hysteria threshold and using "repetitive persistence" and*

5) *deliver instructions in a calm and reassuring manner.*

NOTE: Practice ensures the consistent delivery of instructions necessary for patient survival. Your comfort level with your skills makes it easier for you to give good telephone instruction because you are calmer and confident. Your manner then calms the caller and makes it likely that the caller will relax and be more willing to follow your instructions.



Giving Good Telephone Instructions

- Refine interrogation skills
- Familiarize yourself with cardiac arrest as a medical emergency
- Practice giving medically approved protocol for the emergency
- Practice overcoming the "hysteria threshold" and using "repetitive persistence"
- Deliver instructions in calm and reassuring manner

2-3-5

Communication Skills for Providing Medical Instructions. Properly communicating telephone instructions takes more than just reading the instructions to the caller. In general there are six skills or techniques, that you can use to make your communication better. They include:

1) *be calm and reassure the caller;*

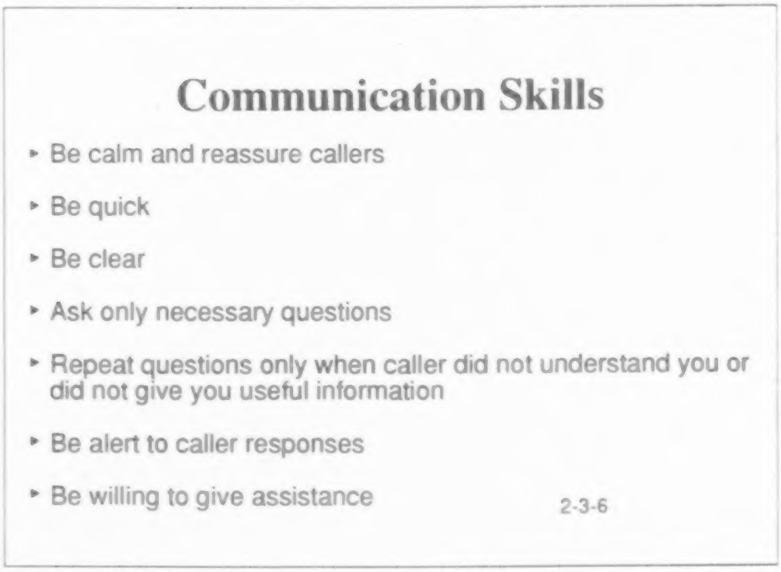
2) *be accurate;*

3) *be clear (speak slowly and enunciate properly);*

4) *follow the scripted telephone treatment sequence;*

5) *repeat instructions only when callers don't understand the instruction or haven't given you the right information and*

6) *listen carefully.*



Communication Skills

- Be calm and reassure callers
- Be quick
- Be clear
- Ask only necessary questions
- Repeat questions only when caller did not understand you or did not give you useful information
- Be alert to caller responses
- Be willing to give assistance

2-3-6

?

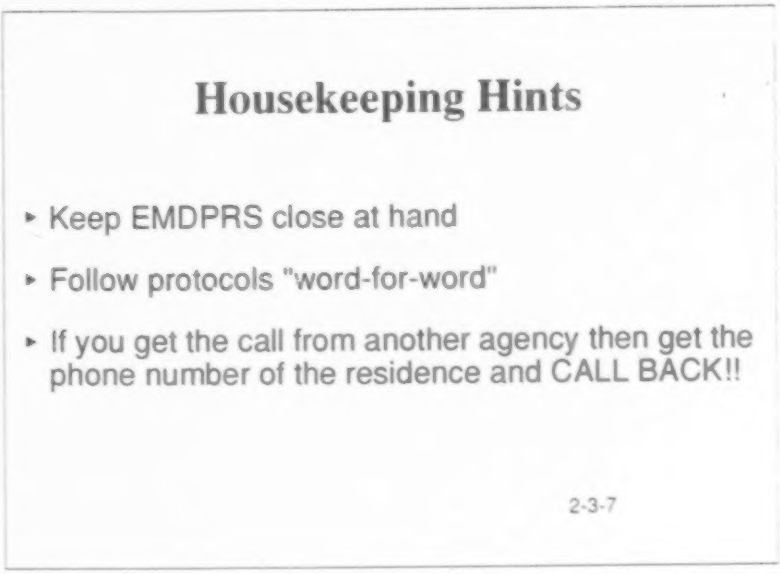
QUESTION?	*What is the role of an EMD in emergency situations? Why are EMDs so important? What types of things should be practiced? Can you name the communication skills that are most important to the proper provision of telephone medical instructions?*

Helpful Housekeeping Hints. Below are some hints that will help make it easier for you to provide instructions to callers. They include:

1) *keep the EMDPRS close at hand;*

2) *follow the protocols "word-for-word" and*

3) *if you get the call from another agency, get the phone number of the residence and* ***CALL BACK****.* This might happen if you work for an agency where police and/or fire dispatchers (or whomever) are not located in the same facility as you.



Housekeeping Hints

- Keep EMDPRS close at hand
- Follow protocols "word-for-word"
- If you get the call from another agency then get the phone number of the residence and CALL BACK!!

2-3-7

?

QUESTION?	*Can you think of any additional hints that might make delivery of instructions better? If so, share them with the class.*

Summary

In this unit, you learned the proper methods for delivering medical instructions. You learned why the EMD is most important in the provision of the instructions, the basic philosophy behind telephone instructions and how to prepare yourself for giving these instructions. Finally, you learned some tips that will make it easier to deliver these instructions.

In Module 3, you will learn about the development and use of the Emergency Medical Dispatch Protocol Reference System (EMDPRS) and you will receive training on each of the 32 chief complaint types. You also will learn how to read and use the EMDPRS your agency uses.

MODULE 3
Introduction to The EMDPRS and 32 Chief Complaint Types

MODULE OVERVIEW

The major "tool of the trade" for EMDs is the Emergency Medical Dispatch Protocol Reference System (EMDPRS). Understanding the layout and design of the EMDPRS is essential to helping you do your job in the most effective manner. It is important to also understand the general medical content represented by the thirty-two chief complaint types covered here. The medical content of these thirty-two chief complaints covers information that should be contained in every EMDPRS. It is important to note, however, that not all EMDPRS ***have*** thirty-two chief complaints.

Module 3, Introduction to The EMDPRS and 32 Chief Complaint Types, introduces you to the basic layout and structure of Emergency Medical Dispatch Protocol Reference System (EMDPRS) protocol cards. You will learn about the three types of protocol cards, major groups of information, and you will be introduced to your local EMDPRS and its structure.

This module also covers the major chief complaint types. You will learn about the three categories of complaints (based on the medical event) and then proceed to learn about the thirty-two complaint types that are used to develop the protocols. Also presented is the major medical information that you need to learn about each, including any special pediatric considerations you should know.

Module 3 contains the following Units:

Unit 1:	*Introduction to the EMDPRS*
Unit 2:	*Introduction to the 32 Chief Complaint Types*

MODULE OBJECTIVES

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Upon completion of this module, you will be able to:

1. Identify the three categories of protocols within an EMDPRS.

2. Identify the design components of each protocol within the EMDPRS.

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3. Explain the purpose and kinds of information found in each of the components of the protocols of an EMDPRS.

4. Discuss/identify the categories of medical complaint types.

5. Describe the contents and structure of an EMDPRS.

6. Demonstrate use of each of the thirty-two chief complaint cards using your locally approved EMDPRS.

MODULE 3 - UNIT 1
Introduction to the EMDPRS

UNIT OVERVIEW

Aside from good telecommunications skills, good judgment and satisfactory operational equipment, the most important tool available to the EMD is the Emergency Medical Dispatch Protocol Reference System, aka EMDPRS.

Unit 1, Introduction to the EMDPRS, teaches you to understand the basic concepts behind the development and arrangement of information in the EMDPRS. You will learn that all EMDPRSs contain basically the same types of information, and in relatively the same order. By learning the types of information found in an EMDPRS, you will be able to quickly understand and use *any* EMDPRS.

UNIT OBJECTIVES

Unit Learning Objectives

Upon completion of this unit, you will be able to:

1. Identify the three categories of protocols within an EMDPRS.
2. Identify the design components of each protocol within the EMDPRS.
3. Explain the purpose and kinds of information found in each of the components of the protocols of an EMDPRS.

Enabling Learning Objectives

To meet the unit learning objectives, you will:

1.1 Identify the three types of protocols within an EMDPRS.

1.2 Describe the differences in content between the three types of protocols within an EMDPRS.

2.1 List and describe the major sections of protocols within an EMDPRS.

MODULE 3 - UNIT 1
Introduction to the EMDPRS

3.1 Describe the types of information gathered or provided, for each section, for each of the three types of protocols within an EMDPRS.

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Introduction to EMDPRS Structure and Layout

The Emergency Medical Dispatch Protocol Reference System (EMDPRS) is frequently referred to as "guidecards, protocol cards, scripts or cards."

Every agency has its own set of locally medically approved protocols. Their structure and contents vary from agency to agency, but overall they tend to contain similar information. It is up to you to practice regularly with the EMDPRS used by your agency.

NOTE: This unit illustrates the types of information found on most EMDPRS cards. ***The EMDPRS sample pages you will receive while training on this unit are generic and are not approved for use once you return to your agency.*** Locally approved cards will be reviewed at the end of this unit.

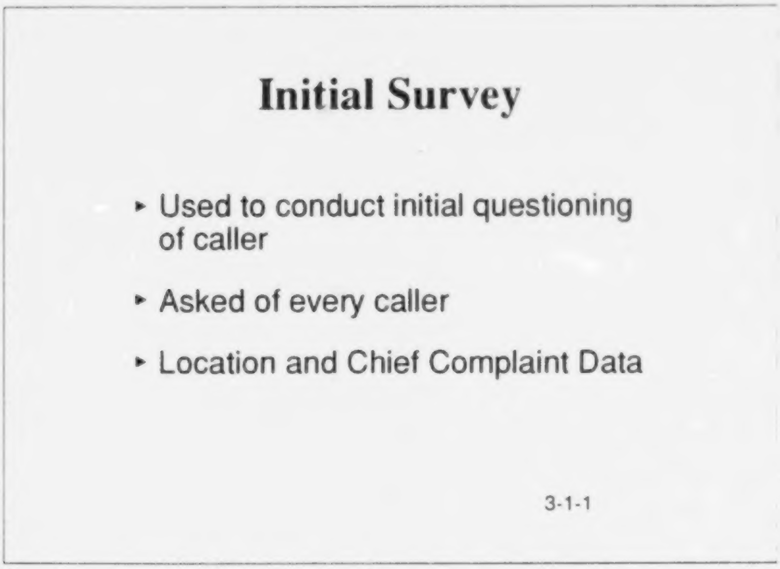
EMDPRS protocols are designed to present medical information in a logical and structured sequence. The order in which the information is shown on protocols will vary, based on the information that your local medical advisory personnel determines to be most important.

Descriptions of Three Protocol Types. Generally, all EMDPRS contain, at a minimum, three protocol types. Each of these protocols is designed to meet a specific need. These needs are described on the following pages. The protocol types are as follows:

1. **The Initial Survey/All-Caller Interrogation Protocol.** This protocol is used to conduct the initial questioning of all callers, in an effort to gather criteria that help you to focus your information gathering activities.

   The initial survey protocol lists the questions to be asked of ***every*** caller. Questions are used to gather ***location*** (including telephone number) and ***patient status information*** (like patient age, status of breathing and level of consciousness). The information you get from the caller forms the basis for dispatch, information dissemination and further inquiry (as indicated by the EMDPRS).

   It is very important that you use this card for every call you take. This card points you to the proper protocol card and helps you focus the caller. It is the very first step in getting the *Where, What, How, Who, When* information you need for effective dispatch.



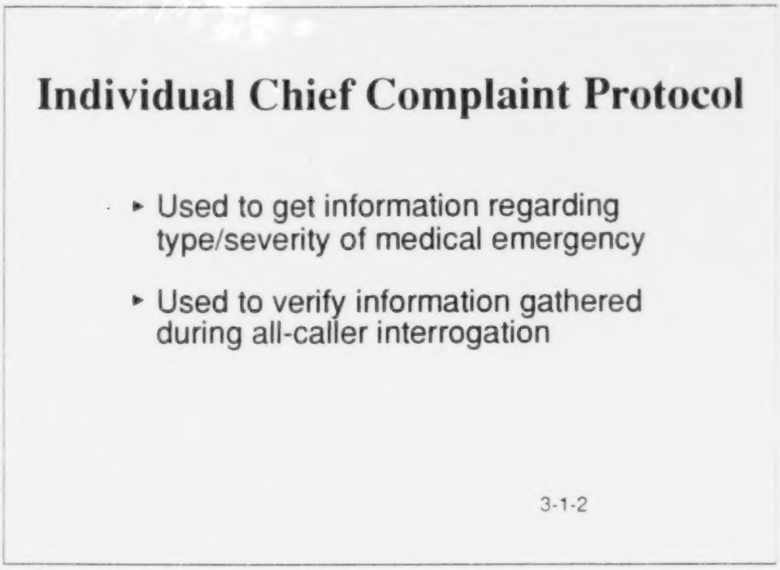
Initial Survey

- Used to conduct initial questioning of caller
- Asked of every caller
- Location and Chief Complaint Data

3-1-1

2. **The Individual "Chief Complaint" Protocol.** The individual "chief complaint" protocol is used to get information from all callers regarding the type and severity of medical emergency being reported.

The individual "chief complaint" protocol is used by EMDs to verify (and get more) information on the chief medical complaints being reported by callers.



Individual Chief Complaint Protocol

- Used to get information regarding type/severity of medical emergency
- Used to verify information gathered during all-caller interrogation

3-1-2

NOTE: Experience indicates that the information found in the thirty-two chief complaint types discussed during this training represent the majority of emergency medical conditions that are likely to be reported by callers. Remember, many programs will have different groupings of these thirty-two chief complaint types.

3. **Information found in each of the thirty-two chief complaint protocols.** Each of the thirty-two protocols contains four major design components:

   a) *Key Questions and Inquire of Caller.* The purpose of these two sections is to gather additional, specific information not received or asked for by the initial survey protocol.

The "Key Questions" section lists important questions that you need to ask in order to gather additional medical information about the patient's condition.

The "Inquire of Caller" section is used to help guide callers into giving you better, clearer information. Caller responses to these questions give you the information you need to determine the appropriate telephone medical instructions to give callers when (and if) required.

b) *Dispatch Priorities (aka "Medical Dispatch Criteria").* The "Dispatch Priorities" section identifies the proper types of response allocations that are appropriate to the situation. Responses are prescribed and approved by the local Medical Director.

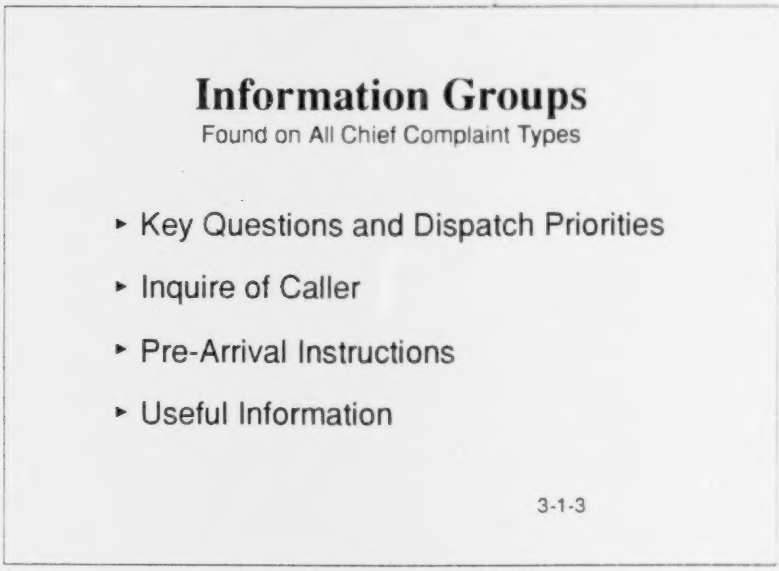
☛ **NOTE:** You should be able to dispatch the proper medical response to the scene based on the information gathered in the "Key Questions" section.

c) *Pre-Arrival Instructions.* The purpose of this section is to list the basic information that you should give callers. It does not include medical instructions. It also helps you prepare callers for the arrival of the medical personnel you dispatched.

d) *Useful Information.* This section gives you additional information about the medical situation including insights and possible complications.

NOTE:	The information in the "Useful Information" section is designed specifically to expand your knowledge, relative to the chief complaint type being reported by the caller. It is not intended to be shared with callers.

An example of the Individual "Chief Complaint" Protocol is the ABDOMINAL PAIN/INJURY card.



Information Groups
Found on All Chief Complaint Types

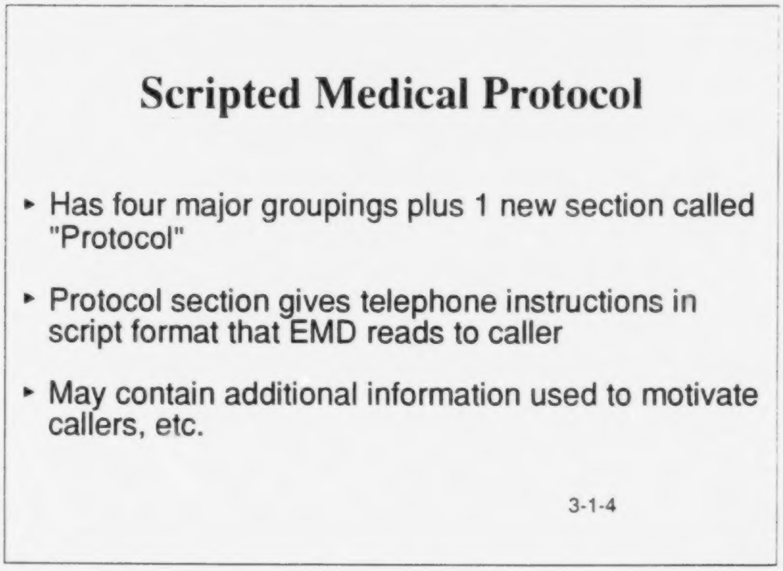
- Key Questions and Dispatch Priorities
- Inquire of Caller
- Pre-Arrival Instructions
- Useful Information

3-1-3

4. **The "Scripted Medical Protocol."** The "scripted medical protocol" is a special type of protocol. These protocols give scripted telephone medical instructions (i.e. - protocols) that you are supposed to give to callers when immediate care needs to be given to victims in order to save their lives. These must be read aloud to the caller, word-for-word. The instructions that you give callers help them apply life-saving treatments to the victim prior to the arrival of dispatched responders.

Examples of the scripted medical protocol are the **CPR, CHOKING, CHILDBIRTH and AIRWAY MANAGEMENT** cards. These protocols contain the scripts you would use to provide telephone medical instructions to callers in this situation.

The scripted medical protocol may include additional information that can help you motivate and encourage callers to follow the instructions, to describe precautions callers should take and describe signs that callers can look for while administering telephone directed medical treatment provided by the EMD.



Scripted Medical Protocol

- Has four major groupings plus 1 new section called "Protocol"
- Protocol section gives telephone instructions in script format that EMD reads to caller
- May contain additional information used to motivate callers, etc.

3-1-4

Summary

This unit has introduced you to the basic design and structure of an EMDPRS. You have been trained on the three card types (All-Caller Interrogation, Individual "Chief Complaint" Protocol, and Scripted Medical Protocol) and the major sections of the cards. This unit also trained you on the information types found in each section of a card.

Remember, the cards you use back at your site must be approved by the medical director of your EMD program.

The next unit introduces you to the thirty-two chief complaint types. Module 3, Unit 2 provides you with basic medical information for each complaint type. Also, you will be trained on the use of your local medical protocol card for each complaint type.

Introduction to the 32 Chief Complaint Types

UNIT OVERVIEW

Your position as an EMD requires familiarity with a large number of medical complaints. Experience indicates, however, that there are generally thirty-two complaints that occur most frequently.

Unit 2, Introduction to the 32 Chief Complaint Types provides you with general medical information about the thirty-two chief complaint types. You will review the information provided in this trainee guide ***and*** the information found in your locally approved EMDPRS.

UNIT OBJECTIVES

Unit Learning Objectives

Upon completion of this unit, you will be able to:

4. Discuss/identify the categories of medical complaint types.
5. Describe the contents and structure of an EMDPRS.
6. Demonstrate use of each of the thirty-two chief complaint cards using your locally approved EMDPRS.

Enabling Learning Objectives

To meet the unit learning objectives, you will:

4.1 Identify the thirty-two chief complaint types.

4.2 Define/discuss the difference between an individual chief complaint, a traumatic chief complaint type and a time/life-critical chief complaint type.

4.3 Discuss the difference between signs and symptoms.

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4.4 Describe how to identify "chief complaints."

5.1 Discuss the purpose/focus of the questions for each category of chief complaint type (individual vs. traumatic vs. time/life-critical events).

6.1 Demonstrate using the EMDPRS with a call about a specific complaint type.

  6.1.1 Identify critical elements in cardiac arrest survival.

  6.1.2 Describe the role of the EMD in providing telephone CPR.

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Introduction to The Chief Complaints

A Quick Review of Important Concepts

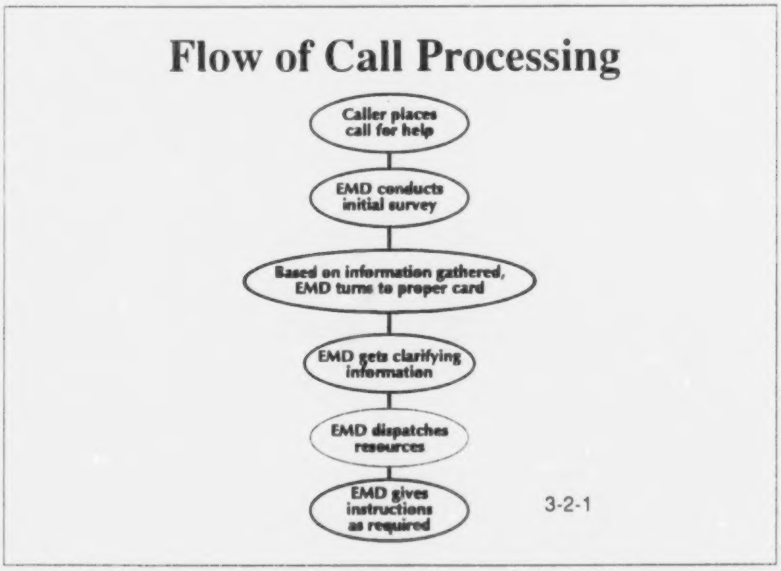
☛ **Overview of The Process.** As you have already learned, every caller undergoes some sort of initial questioning to identify if the patient is conscious and/or breathing. In some systems this is called the *"Initial Survey,"* the *"All-Caller Interrogation"* or *"Entry Level Interrogation."*

Normally the process begins with the initial survey. This initial survey and the answers you receive from the caller direct you to the proper individual chief complaint card, which is followed by specific key questions as directed by the card. Once you get this information, you can make a decision on unit response configuration and mode and dispatch units to the scene. You can now return to the caller and begin the pre-arrival (post-dispatch) instructions required for the situation at hand.

After the location and call-back number have been determined, you continue the initial assessment and get the patient's age, status of consciousness and status of breathing. If the patient is conscious or unconscious and breathing, the dispatcher immediately knows that the patient is alive and now has a little more time to get specific information from the caller about the patient's condition. This enables you to send resources in the proper response configuration and mode. This also allows you to give the caller accurate and useful pre-arrival (post-dispatch) instructions.

If the patient is unconscious and not breathing, or if the patient is unconscious and the caller can't tell if the patient is breathing or not, you should assume a possible cardiac arrest situation exists and turn immediately to the appropriate protocol for the provision of CPR.

The CPR protocol has clear and understandable instructions that take the caller through airway interventions prior to the provision of chest compressions. If the patient has merely choked and is not in cardiac arrest, you need to provide the instructions for choking intervention rather than CPR. The design of the protocol guides you through this process.


Flow of Call Processing
Caller places call for help
EMD conducts initial survey
Based on information gathered, EMD turns to proper card
EMD gets clarifying information
EMD dispatches resources
EMD gives instructions as required
3-2-1

Caller emotional status. Remember that the caller's emotional status is not a clear indication of the medical problem's severity. You must adhere to the questions found on the protocol and make decisions based on the symptoms that are reported and the existence (or absence) of symptoms that indicate the need for a high priority response.

The most common high-priority symptoms included in the majority of EMDPRS are chest pain, breathing problems, altered levels of consciousness and, in some cases, severe hemorrhage. In most cases, when these symptoms are reported, you will initiate a high level ALS response due to the potential severity of the situation.

Signs and Symptoms. As you may recall from Module 1, there is a difference between *signs* and *symptoms*. Signs are things that are found upon examining the patient. Examples of signs include thready pulse, spurting blood, cyanosis (turning blue) and diaphoresis (sweating). Symptoms are things that the patient complains of that s/he is feeling. Examples of symptoms include *"I'm hot/cold," "I'm having a hard time breathing"* and *"I can't feel my toes."*

Identifying the Chief Complaint. This is part of the "initial survey." It is important to remember that the chief complaint is that which is most paramount on the patient's (or caller's) mind.

Patients with multiple complaints will most frequently identify the chief complaint first and then go on to list the secondary complaints, many of which will be symptoms of the chief complaint. Asking "What's wrong?" often confuses the caller and causes them to assume you are asking for a diagnosis. Ask questions that elicit short and descriptive responses from the caller. They are your eyes at the scene, so ask them "What do you see? Tell me what is happening!"

When a caller presents you with multiple chief complaints that seem to have no relationship with each other, you need to select the one that has the most potential to worsen or that has the highest priority symptoms.

The Flow of Call-Processing. Your call-processing should follow a smooth pattern and logical flow. Normally the process begins with initial entry-level questioning, followed by specific key questions. Once this information is obtained the EMD can make a decision on unit response configuration and mode and dispatch units to the scene. The EMD can now return to the phone and begin the pre-arrival (post-dispatch) instructions required for the situation at hand.

Prior to terminating the phone call with the caller, the EMD should ensure that the patient has a clear airway and is breathing. You should also instruct the caller to turn patients gently on their side if they should vomit (unless spinal injury is suspected). In minor or less urgent cases, you need to tell the caller to call back if the patient's condition changes before help arrives.

Medical Complaint Types: Individual Chief Complaints, Traumatic Incidents and Time/Life-Critical Events

Generally speaking, there are two medical complaint types; *Individual Chief Complaints* and *Traumatic Incident Types*. In most cases, the calls you receive fall into these two categories. However, there is a subset of these calls that are also very important for you to know and understand. This subset is called the *Time (or Life) Critical Events.*

Individual Chief Complaints. It is common to assume that all reported problems are individual chief complaints. In some respects that is the case. However, in the field of emergency medical dispatch, there is a distinction between individual chief complaints and traumatic incidents.

Individual chief complaints typically are general medical problems. A medical problem is generally defined as "an illness, either acute or chronic." Proper response and pre-arrival instructions in these cases is based on your ability to gather information regarding:

1. the patient's chief complaint;

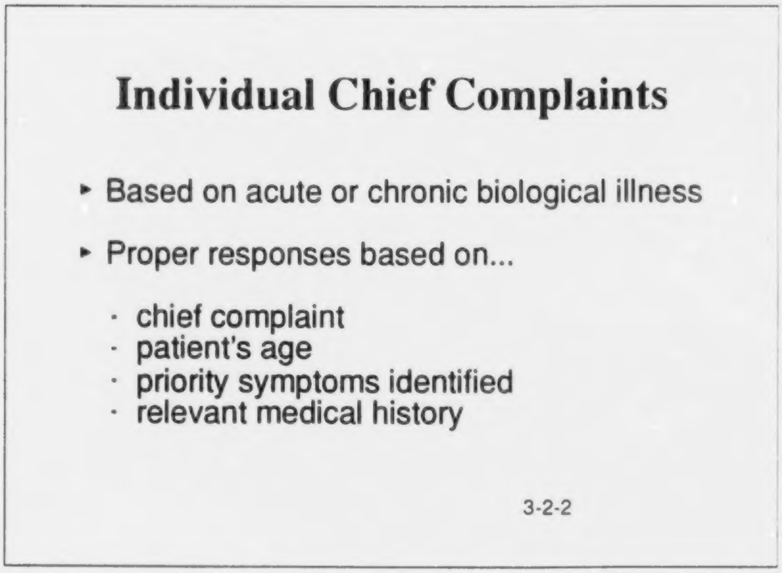
2. the patient's age;

3. the patient's *priority* symptoms (if present) such as severe bleeding, decreased levels of consciousness, respiratory difficulty and chest pain and

4. any patient medical history that is relevant to the situation at hand.

The focus of your questioning is on the existence or lack of priority symptoms most often associated with that particular chief complaint type. In addition, the patient's medical history and age are factors in determining the potential severity of the problem.

Pre-arrival (post-dispatch) instructions in these cases relate primarily to keeping the patient's airway clear, keeping the patient comfortable, gathering patient medications and advising the caller to call back if the patient's condition changes before help arrives.



Individual Chief Complaints

- Based on acute or chronic biological illness
- Proper responses based on...
  - chief complaint
  - patient's age
  - priority symptoms identified
  - relevant medical history

Traumatic Incident Types. Trauma is generally defined as "some physical injury caused by accident or violence." Proper response and post-dispatch instructions in these cases rely on your ability to gather information regarding the nature of the incident type (aka "mechanism of injury"), where the injuries are (core of the body or extremities?) and the identification of priority type symptoms.

Trauma denotes a situation in which a patient has sustained some injury either by accident or violence. The chief complaint is usually reported in the form of a verb (he got hit, shot, cut, etc.) or by a description of the mechanism of injury (an auto pedestrian accident, he fell off the roof, etc.).

Traumatic incident types should be assessed differently by EMDs than individual chief complaint types, because the factors used to determine response levels are different. Studies have shown that the following are the primary determining factors in response when dealing with traumatic incidents:

1. the mechanism of injury;

2. where the injury is located (central or peripheral, torso or arms and legs) and

3. significant priority symptoms (usually altered levels of consciousness indicative to the onset of shock, a head injury, or an underlying medical problem; severe hemorrhage or breathing problems associated with injuries to the central core).

Pre-arrival (post-dispatch) instructions vary widely, based on the situation and complaint type reported. They include the same instructions in many cases as the individual chief complaints, especially as they relate to airway control. However, traumatic incident protocols include more specific injury-related instructions. These directions are designed to protect the patient from receiving further injury from a well-meaning, but untrained, bystander who attempts to help.

Pre-arrival (post-dispatch) instructions in these cases relate primarily to ensuring the safety of the scene (patients, bystanders and responders). Instructions are provided for the control of external bleeding, ensuring the patients airway is clear, advising the caller when it may be best to do nothing, advising the caller to guide the units to the patient and advising the caller to call back if the patient's condition worsens.

Specific Pediatric Considerations (Traumatic Incident Types). Accidents are the most common cause of death in childhood, killing more children than cancer, meningitis, congenital defects, and heart disease combined. Over ***three thousand*** deaths per year occur in infants (under the age of one) from falls, burns, drowning, choking and suffocation. For every accidental death, one hundred children are seriously injured.

Traumatic incident types are by far the most common chief complaint grouping used to report incidents involving children. With regard to CPR and choking intervention, children should be defined clearly as an infant (0-1 year old); child (1-8 years old); or adult (> 8 years old) according to the American Heart Association and the American Red Cross. These conventions should be considered when your agency is developing continuing education or conducting initial training.

In cases of traumatic injury the child should not be moved unless in danger. A common error made at the scene of an injury is for the caller to move or pick up the child, run into the house or shelter and hold the child to comfort him/her. This can prove to be devastating to the child with spinal injuries which can be worsened when the child is being moved by concerned but untrained bystanders. If the child has gotten up and run into the house, she should lie down on a flat surface and be comforted while being kept still and reassured by bystanders.

A spinal cord injury should be suspected if there is any indication of:

1. severe facial or head injuries;
2. unconsciousness reported associated with the incident;
3. numbness, tingling or loss of sensation in any extremity(ies);
4. paralysis or inability to move any extremities;
5. pain in back upon movement or attempt to move or
6. any motor dysfunction reported by the caller.

Children may have critical injuries, but the symptoms may remain hidden until the child reaches a point of rapid deterioration. Critical symptoms such as low blood pressure do not appear as rapidly in children as they do in adults. Other symptoms like breathing and pulse may be difficult to interpret in a child who is hurt or frightened. If priority symptoms are present, time is critical and the child must be taken immediately for care.

Conscious injured children require extra attention, support and reassurance, preferably from a single consistent bystander. This must be communicated through the EMD to the bystander.

Remember, *the emotional condition of the patient and/or caller should not be used as indicator of the severity of the problem*. Lacking experience and knowledge, children may not understand the severity of an incident and may appear to be very calm in the face of crisis. Likewise, bystanders and children may be distraught from witnessing the incident, reacting to the sight of blood or arms and legs bent at unnatural angles.

Prevention is the most powerful treatment for most childhood injuries. The EMD can play a role in injury prevention by recognizing and reporting traffic, playground or other hazards as they are identified in calls relating to childhood injuries.

Traumatic Incident Types

- Based on some physical injury due to accident or violence
- Responses based on...
  - mechanism of injury
  - location of injury (core or extremity?)

3-2-3

Time/Life-Critical Chief Complaint Types. These are a subset of indidividual chief complaints and traumatic incident types. They pose the greatest danger to the patient, bystanders and/or responders.

Care should be taken with these cases to ensure that appropriate pre-arrival (post-dispatch) instructions are given and that information regarding the safety of the scene is relayed to the responding units.

Calls of this type may be specifically medical in nature like cardiac arrest, choking, childbirth, unconsciousness, CO poisoning/HAZMAT.

Other calls recevied may have traumatic and individual chief complaint components included in the problem. Examples include a drowning victim with respiratory difficulty and neck pain from a shallow water diving incident; an electrocution victim with possible internal burn who has fallen off the telephone pole and who also may have traumatic injuries from a long fall.

Proper call handling relies on your ability to gather information about the chief complaint. It also requires that you gather information about the safety of the scene and other important factors that may require you to dispatch ancillary agencies (like police, fire and/or HAZMAT units).

Pre-arrival or post-dispatch instructions relate primarily to the scripted CPR, choking and childbirth instructions along with situational instructions for specific medical or traumatic incident types with a focus on scene safety.

Time/Life-Critical Events

- Pose greatest danger to patient, bystanders or responders
- Responses based on...
  - scene safety information
  - police, fire, HAZMAT, etc. needs

Philosophy of the Design and Use of the EMDPRS

This unit presents chief complaint information in the order described below. Chief complaints are alphabetized within each of the following groupings:

1. Traumatic Incidents;
2. Individual Chief Complaints and
3. Time/Life-Critical Events.

> **NOTE:** In the "real-world," each EMDPRS may be arranged differently based on the decisions made by the local medical authority. In most EMDPRSs, complaint types are arranged alphabetically.

Philosophy of Use. When determining what an EMDPRS should look like or how it should be used, medical advisors consider the following questions. Should my EMDPRS be a strict protocol or a dispatch guideline? Should we mandate its use or make it optional?

In your area, use of the EMDPRS may vary from someone who works in another agency or city. It is up to you to be aware of the policies your agency has set up for using the locally approved EMDPRS.

Design Philosophy. In Unit 1 of this Module you were presented information on the design of EMDPRSs and were also given the opportunity to study the structure of your local EMDPRS. The major elements presented were:

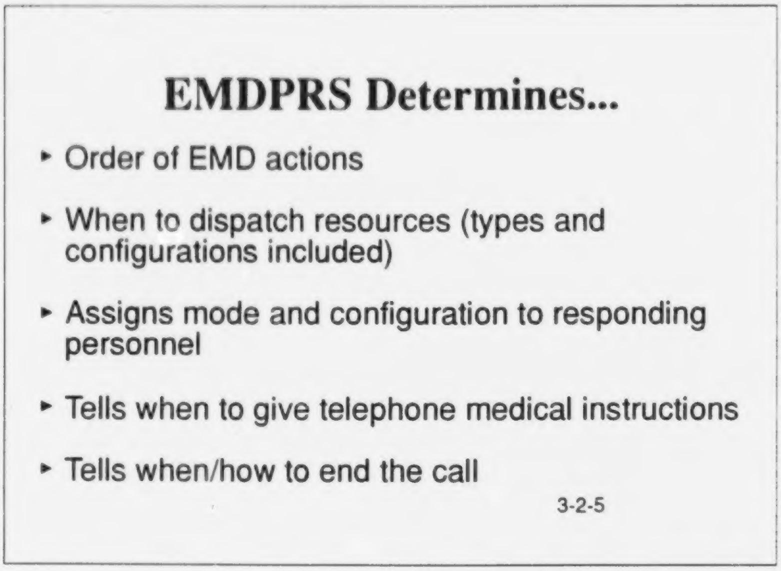
1. the Initial Survey/All-Caller Interrogation;
2. the Individual Chief Complaint Protocol;
    a. the "Key Questions" sections of a protocol and the information found there;
    b. the "Dispatch Priorities" section of a protocol and the information found there;
    c. the "Protocol" section that is found only on "Scripted Medical" protocols, and the information found there and

d. the "Additional Useful Information" section and the information found there and;

3. the Scripted Medical Protocol.

Specific design characteristics of the EMDPRS. The EMDPRS is designed to maximize EMDPRS use and flow. The EMDPRS determines:

1. the **order** that various actions are taken by the EMD;
2. when the EMD is to dispatch resources;
3. the **mode** (Hot vs. Cold) and **configuration** (Type of Unit or Units) of the response and
4. when the EMD is to provide instructions.



EMDPRS Determines...

- Order of EMD actions
- When to dispatch resources (types and configurations included)
- Assigns mode and configuration to responding personnel
- Tells when to give telephone medical instructions
- Tells when/how to end the call

3-2-5

Detailed Review of the Thirty-two Chief Complaint Types

Traumatic Incident Types. Following is a detailed review of the eleven Traumatic Incident Type protocols. Your instructor will provide additional information about these, and then you will be given the opportunity to practice using your local EMDPRS protocol for the given chief complaint.

1 - Animal Bites (Traumatic Incident Type)

1. Background:
   a. Except in rare instances, animal bites are non-urgent in nature. There are some critical situations that can be identified with proper questioning from the EMD using the EMDPRS.
   b. Identification of high level emergencies rely on the identification of severe bleeding, the site of the bite and the level of consciousness of the patient.
   c. Animal control should be contacted to attempt to identify and quarantine the animal.
   d. It is important to determine the type of animal and where the animal is at the time of the call.
2. Common Causes:
   a. The most common animal bite is a dog bite. However, many individuals are bitten by unusual or exotic animals they may have as pets.

b. In some areas of the country, snake bites are fairly common.

3. Common Symptoms Described by Caller (presentation)

   a. Solitary bites, often without serious bleeding.

4. Instructions Commonly Provided:

   a. Monitor and maintain patients airway, especially if patient is nauseated or vomiting.

   b. Treat for shock:

      1) Control bleeding.

      2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS; allow patient to assume a comfortable position.

      3) Keep patient warm.

      4) DO NOT GIVE PATIENT FOOD OR DRINK.

   c. Control bleeding with direct pressure.

   d. Call back if the patient's condition changes before help arrives.

   e. For snake bites, DO NOT ELEVATE THE BITTEN AREA, DO NOT USE ICE and DO NOT ATTEMPT TO REMOVE VENOM IN ANY WAY. Reassure caller that most snake bites are not life-threatening.

f. Regardless of how minor the bite seems to be, patients should be advised to seek medical attention.

g. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

    a. Children are common victims of pet bites, and their smaller size and uncontrolled reactions to animals make them more likely than adults to suffer serious facial injuries.

    b. In situations where envenomation (venom injected into bloodstream) is possible through snake, fire ant, scorpion and spider bites, children will commonly suffer more severe reactions, including death, than will adults.

2 - Assault/Sexual Assault (Traumatic Incident Type)

1. Background:

    a. These chief complaints often pose a danger to the responders and the bystanders as well.

    b. Sexual assaults often are accompanied by traumatic injuries. The EMD should assume there are physical injuries in these cases.

    c. The victim should be protected from further injury if possible.

d. Information should be relayed to responding crews regarding scene security, particularly if the assailant is nearby. In these cases, responders should be advised to stay away until the police secure the scene and the evidence.

e. **PRESERVATION OF EVIDENCE.** *The EMD should advise callers* **not** *to bathe or shower, change clothes, and not to eat or drink anything until help arrives and gives them instructions.*

f. In cases of sexual assault, Crisis Intervention counselors should be notified per departmental standard operating procedures (SOP).

2. Common Causes: Self Explanatory

3. Common Symptoms Described by Caller (presentation)

a. Often the caller exhibits a high emotional content due to the frightening nature of the situation. Compassion and patience should be exercised by the EMD.

b. Psychological and/or physical injuries present.

c. Facial injuries commonly accompanied by severe bleeding.

4. Instructions Commonly Provided:

a. Monitor and maintain patient's airway, especially if patient is unconscious, nauseated or vomiting.

b. Treat for shock:

1) Control bleeding.

2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.

3) Keep patient warm.

4) DO NOT GIVE PATIENT FOOD OR DRINK.

c. Control bleeding with direct pressure.

d. Call back if the patient's condition changes before help arrives.

e. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

a. Most pediatric cases of assault/sexual assault are reported as child abuse situations. Twenty-five percent of child abuse cases involve patients under the age of 2 leaving seventy-five percent in all other age groups up to the age of 16. Twenty percent of physically abused children are permanently injured. There are over 2000 deaths annually in the U.S. from abuse and neglect.

b. Intentionally inflicted injury is one of the leading causes of death in children under 5, with over 2000 deaths annually in the US. However, the call to EMS will rarely describe the incident as assault or abuse. EMS providers should therefore always be

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alert to the possibility that what appears to be an accidental injury in a young child may have in fact been inflicted. Pediatric cases of assault/sexual assault should be reported as child abuse. In most states EMS providers are considered mandated reporters of suspected child abuse or neglect and as such, in most states, are protected against charges of libel when reporting suspected child abuse.

3 - Burns (Traumatic Incident Type)

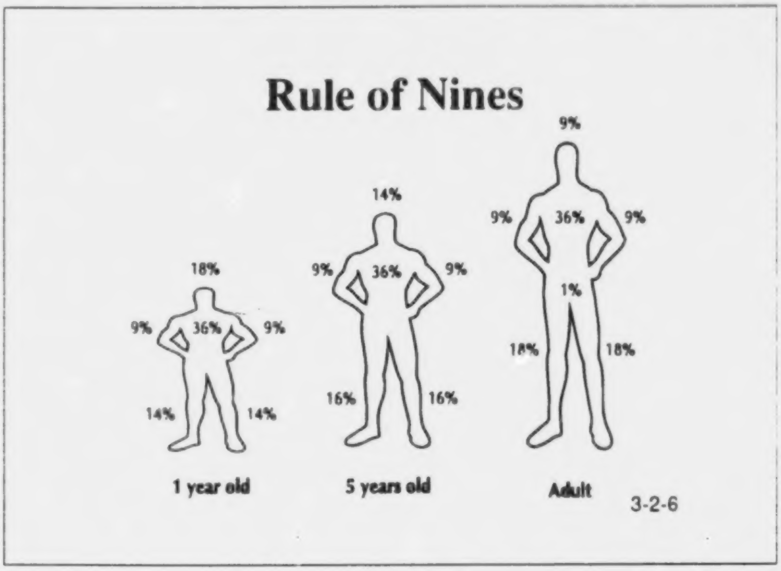
1. Background:

   a. There are various types of burns encountered in EMS including thermal burns, chemical burns and electrical burns.

   b. The size and severity of the burn usually determines the level of emergency represented by a particular incident.

   c. The size of a burn is usually based on the total body surface area that has been affected. This is done in multiples of nine commonly referred to as the "Rule of Nines." Usually, second-to-third degree burns over twenty-percent of the body warrant emergency responses.

Look at **Figure 3-2-6**. The arms each represent about nine percent of total body area. The torso represents thirty-six percent of total body surface area (eighteen percent for the front - or chest area - and another eighteen percent for the back).


Rule of Nines

3-2-6

d. Burns are classified as first, second or third degree indicating the depth of the burn. First being sunburn like, second resulting in blistering and third involving all layers of the skin and underlying tissue. This is sometimes called a full thickness burn.

e. The rule of nines does not accurately predict surface area of children under age eight. A useful estimate can be made by assuming that the palm of the child's hand approximates 1% of his/her body surface area; the burn size can then be estimated by the number of "hands" needed to cover the burn.

f. Electrical burns should always be assumed to be worse than they appear on the surface, as internal burns may be present between the point of contact and the site where

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the electricity grounded out of the patient.

- g. Patients with facial burns (particularly thermal) should be monitored closely by the EMD for possible airway complications.
- h. It is important to determine if anything is still burning and if so, advise the caller to evacuate the dangerous area if safe to do so.
- i. In cases of burns that occur in enclosed areas, be aware of the possibility of carbon monoxide (CO) or other toxic poisoning/ inhalation.

2. Common Causes:
   - a. Thermal burns from a heat source.
   - b. Chemical burns from an acid or lye compound.
   - c. Electrical burns from an electrical source.
3. Common Symptoms Described by Caller (presentation)
   - a. Burns are usually very painful as described by the caller.
   - b. The caller may describe blistering or the peeling off of skin.
   - c. Patients with electrical burns may be described as unconscious. If this is the case assume cardiac arrest and prepare to perform CPR.

4. Instructions Commonly Provided:

    a. Monitor and maintain patient's airway, especially if patient is unconscious.

    b. Cool small burns (ten percent or less total body area) with clean water.

    c. If the patient is still burning, extinguish flames with water or roll patient in a blanket or whatever is handy. DO NOT REMOVE BURNT CLOTHING.

    d. Do not apply anything to the burned area. Attempt to keep it clean and the patient covered.

    e. Continuously irrigate or flush all household chemical burns with water until help arrives.

    f. Caution caller to be aware of electrical hazards if electrical burn is reported. Be particularly aware of electrified water. If the patient is still in contact with the electrical source do not touch them.

g. Treat for shock:

    1) Control bleeding.

    2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.

    3) KEEP PATIENT WARM (maintain body temperature).

h. In cases of Industrial chemical exposure, contact HAZMAT resources according to local HAZMAT procedures.

i DO NOT GIVE THE PATIENT ANYTHING TO EAT OR DRINK. In cases of internal burns from a caustic ingestion from an acid or lye, advise giving the patient water to dilute the chemical if possible.

j. Call back if the patient's condition changes before help arrives.

K. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

a. Electrical burns, chemical, thermal burns and scaldings are the most common burns in children.

b. Scald burns common to the toddler aged child frequently cause more extensive damage than a similar burn in an adult or older child because the skin is thin. Scald burns that blister initially like a second degree burn may in fact be subsequently revealed as third degree or "full thickness" burns.

c. In addition to size and depth of the burn, other factors that contribute to the severity of burns in children include:

1) the age of the child (worse outcome under 2 years)

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2) the location (hands, face, perineum may require specialized care)

3) underlying medical conditions (diabetes, heart conditions, immune suppression)

4) associated injuries

5) intentional burns (abuse)

d. If a flame or explosive burn occurred within a closed space, the possibility of thermal injury to the respiratory tract must be carefully evaluated. Signs include singed nasal hairs or soot in the sputum ("spit"). Symptoms include cough, wheezing, hoarseness, noisy or rapid breathing. Children with thermal injury to the airway may have rapid swelling resulting in partial or even complete airway obstruction and may need early and aggressive airway management by skilled providers.

4 - Eye Problems/Injuries (Traumatic Incident Type)

1. Background:

a. The eye is a resilient structure made of very fibrous tissues. The globe of the eye is difficult to lacerate or penetrate. If the injury is a penetrating object, consider that it may have hit the eye with sufficient force to go through the eye and into the cranium. This may result in an underlying head injury. If the level of consciousness is dropping or altered this should be suspected.

   b. The fluids in the eye are very fragile. If the eyeball is cut open or leaking fluid then it should not be touched or bandaged. The caller should be advised to not put direct pressure on the eye to arrest bleeding. The patient should sit up and be calmed until help arrives.

   c. Chemicals and foreign bodies are common injuries to the eye. The eye should be irrigated with room temperature water until help arrives.

   d. The caller should not attempt to remove any impaled objects in the eye. This may cause further damage to the eye.

2. Common Causes:

   a. Severe eye injuries include penetrating wounds to the eye, lacerated eyes, retinal detachments and eye injuries associated with lowered levels of consciousness possibly indicative of an underlying head injury.

   b. Common moderate eye problems include chemicals in the eye, arc welding burns and other thermal burns of the eye.

   c. Minor eye problems include contact lens problems, foreign bodies, corneal abrasions and contusions from orbital fractures (fractures of the bones surrounding the eye).

3. Common Symptoms Described by Caller (presentation)

    a. Severe pain and discomfort. This is particularly true with foreign bodies in the eyes.

    b. Bleeding is usually minimal unless surrounding facial trauma is associated with the injury.

    c. If the eyeball itself has been lacerated or punctured there may be a pinkish fluid leaking out of the eye. This may be the fluid within the eye and the caller should be advised to do nothing to treat this injury until help arrives. Tell the caller NOT to bandage the eye, or put any pressure on it.

    d. Penetrating object visible. Advise the caller not to remove the penetrating object.

4. Instructions Commonly Provided:

    a. Monitor and maintain patient's airway, especially if patient has lowered level of consciousness.

    b. Allow patient to assume a comfortable sitting position.

    c. If the patient has a small foreign body (like dust or small dirt particles) or a chemical in the eye, it should be irrigated until help arrives. Have the caller irrigate the eye under a steady stream of room temperature water and irrigate the eye with the injured eye downhill from the nose. If the eye is being irrigated outside with the water hose, advise the caller to run the water until any hot water in the hose has been flushed out to prevent further injury to the patient.

d. If the eyeball is cut or leaking fluid it should not be touched, bandaged or otherwise disturbed by bystanders. The patient should be made to sit up and be calmed until help arrives.

e. Treat for shock:

  1) Keep patient warm (maintain body temperature).

  2) DO NOT GIVE PATIENT FOOD OR DRINK.

f. Call back if the patient's condition changes before help arrives.

g. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

  a. A child with an isolated eye injury is best transported with a parent or other familiar adult to help maintain the position of comfort. Attempts to restrain the child may elevate intraocular pressure.

5 - Fall Victim (Traumatic Incident Type)

1. Background:

  a. This protocol is useful for falls where back or other injuries have occurred.

b. A long fall may be considered any fall that exceeds the height of the patient. Falls of greater than six feet are often considered long falls.

c. With any long fall the EMD should suspect that a spinal injury exists and use spinal precautions in providing telephone aid.

d. Long falls are usually third party in nature requiring the EMD to provide instructions through the third party.

e. Falls may have been preceded by a medical incident. This information should be relayed to the responding personnel.

f. The length of the fall is the easiest determinant of severity. The EMD must be mindful that external trauma as well as internal injury may exist.

g. Any fall victim reported to be unconscious or with associated head or facial injuries should be assumed to have a spinal cord injury. Do not move the patient.

h. Falls in the elderly resulting in hip or wrist fractures are a common complaint.

i. Ground level falls resulting in minor injury are another common call you will receive.

2. Common Causes:

   a. Medical causes such as epilepsy, CVA (stroke), fainting, etc.

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   b. Industrial and construction accidents.

   c. Environmental factors like ice, snow, alcohol, drugs, etc.

3. Common Symptoms Described by Caller (presentation)

   a. Visible external trauma.

   b. Numbness, tingling or loss of movement in cases of associated spinal cord injury.

   c. Anxiety due to the mechanism of injury.

4. Instructions Commonly Provided:

   a. Monitor and maintain patient's airway, especially if the patient has a decreased level of consciousness.

   b. Do not move the patient, do not splint the injuries or otherwise disturb the patient unless there is an airway compromise.

   c. Treat for shock:

      1) Keep patient warm (maintain body temperature).

      2) DO NOT GIVE PATIENT FOOD OR DRINK.

   d. Use direct pressure to control external bleeding.

   e. Call back if the patient's condition changes before help arrives.

f. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

a. Some special categories of falls exist for children, including walker falls, playground falls, falls from buildings and inflicted injury attributed to an accidental fall.

b. Toddlers and infants can sustain skull fractures and potential brain injury in falls under four feet *if the contact surface is not shock-absorbing* (i.e., falls from shopping cart to a concrete or tile surface, from beds or changing tables to uncarpeted floors, or down uncarpeted stairs in a walker).

c. The severity of playground injuries relates to the height of play structures and the shock absorbing qualities of the contact surface.

d. Accidental falls from windows happen commonly during the summer months and can be prevented by window guards, but children also fall from windows because they are pushed or because they are deliberately jumping to escape perceived threat or to attempt suicide.

e. Injuries attributed to a fall from a mechanism that is not developmentally likely or possible may be due instead to child abuse/inflicted injury. (An example might be a one month old said to have fallen from the changing table, at an age when most infants cannot roll from back to stomach.)

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6 - Heat/Cold Exposure (Traumatic Incident Type)

i. Background:

a. Heat related problems can be classified as either heat exhaustion or heat stroke, the latter representing a more serious situation.

b. Heat exhaustion is caused by a metabolic imbalance resulting in flu like symptoms such as pallor, nausea and vomiting. In this case the patient should be moved to a cooler environment and be given fluids to drink (UNLESS THE PATIENT IS NAUSEOUS OR VOMITING). Heat exhaustion usually is secondary to outside exertion in hot and humid weather.

c. In cases of heat stroke the body loses it's ability to thermoregulate itself. The body core temperature rises and the patient's level of consciousness decreases. Frequently, the patient will feel hot and dry to the touch, though they may also be profusely sweating (if they were engaged in some physical exertion). In some cases, the skin will appear reddened. The patient should be moved to a cooler environment and cooled with water. The patient should not be given fluids or anything to drink.

d. Cold related problems are usually frost bite or hypothermia, the latter representing the more serious situation.

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e. Frost bite represents a condition that results in the freezing of the peripheral and exposed areas, usually the fingers and toes. The tissue should not be rubbed to rewarm the tissue. The extremities should be kept warm and dry until help arrives. Prevention of further exposure and injury is the focus in these cases.

f. Hypothermia results when the body loses it's ability to thermoregulate itself and generate heat internally. The body core temperature drops and the patients level of consciousness decreases. The patient must be removed from the cold environment and warmed. No fluids should be given to the patient in this case.

g. Long exposure and hypothermia may cause cardiac arrest. "No patient should be assumed dead until he is warm and dead." Provision of telephone CPR, in cases of hypothermia, should be determined by local medical control.

h. Hypothermia patients are prone to ventricular fibrillation with rough handling. Sometimes just moving the patient to the ambulance stretcher will put them into fibrillation. Caution is advised in moving these patients.

2. Common Causes:

   a. As noted previously.

3. Common Symptoms Described by Caller (presentation)

   a. As noted previously.

4. Instructions Commonly Provided in addition to those noted previously:

   a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.

   b. Treat for shock:

      1) Control bleeding.

      2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.

      3) Keep patient warm (or cool, depending on the exposure being treated).

   c. Do not give the patient anything to eat or drink except in cases of heat exhaustion (and if the patient is not vomiting or nauseous) when the patient is benefited by fluids. Never give anything to drink to the patient with a decreased level of consciousness.

   d. Gather or list the patient's medications for the doctor.

   e. Call back if the patient's condition changes before help arrives.

   f. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

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   a. Pediatric complaints of this type are rare and often are presented to the

EMD as frostbite or chilblains (itching inflammations of the skin due to exposure to moist cold) on exposed tissues such as the fingers, feet and ears. Treatment from the EMD should be limited to getting the patient out of the cold environment and attempting to rewarm the extremity by means other than rubbing the affected tissues.

b. Heat related complaints usually are presented to the EMD as a "sick child" with flu like symptoms, dehydration from playing in the hot outdoors and slight heat exhaustion. Treatment includes removing the patient from the hot environment and providing fluids (if not nauseous or vomiting).

c. Children are more slow to acclimate to hot or humid weather than adults and become dehydrated more rapidly. Children particularly at risk for environmental or exertion caused heat stroke are obese, febrile, have underlying pre-existing conditions like cystic fibrosis or diabetes, or recurrent vomiting and diarrhea. Infants and toddlers are particularly vulnerable to environmental heat stroke when overdressed, left in parked cars, or confined in a hot tub, sauna or any enclosed space.

d. Children are seldom aware of the early signs of cold such as numbness, and may not be as compliant as adults in wearing appropriate covering. Pre-pubertal children with cold injuries can be at risk for growth plate injury and subsequent poor bone growth, especially of fingers and toes. When removing the child from the cold environment, make sure to advise changing wet clothes for dry coverings.

7 - Bleeding (Traumatic Incident Type)

1. Background:

    a. Bleeding can be categorized as having two sites of origin, internal or external.

    b. Vomiting blood, bleeding from the rectum or untimely vaginal bleeding should always be considered more serious than external bleeding.

    c. External bleeding can be categorized as either being venous (dark red oozing blood) or arterial (bright red spurting blood). In either case the EMD must remember that ninety-five percent of all external bleeding can be controlled with direct pressure.

    d. The caller may be frightened by what appears to be a volume of blood. Reassure the caller and calm them.

    e. The EMD should not advise using pressure points or tourniquets. If the bystanders have already applied a tourniquet, leave it on the patient and allow the on-scene personnel to deal with it.

    f. Because of the vascular nature of the face and scalp, lacerations to these areas may appear to be serious bleeds. Remember to focus on controlling the bleeding rather than estimating volume of blood loss.

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g. Patients on blood-thinning drugs or those with hemophilia should be considered higher priority, life-threatening events and receive a higher level response.

h. The primary focus of the EMD should be on control of external bleeding, identifying symptoms indicating the onset of shock and airway maintenance of the unconscious patient.

2. Common Causes:

   a. Self explanatory for external bleeding.

   b. Internal bleeding can be caused by trauma, chronic or acute gastrointestinal ulcerative disease, gynecological/ obstetric maladies and ruptured abdominal aortic aneurysms.

3. Common Symptoms Described by Caller (presentation)

   a. Blood squirting out or pulsating out are common descriptions of external arterial bleeding.

   b. Internal bleeding can be manifested as coffee ground-like emesis (vomit), blood in the emesis, dark tarry stools (indicating upper GI bleeds) or blood in the stools (indicating a lower GI bleed).

   c. Anxiety, lowered levels of consciousness, agitation, chills, along with other classic symptoms of shock, are often reported in association with serious bleeds.

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4. Instructions Commonly Provided:

    a. Monitor and maintain patient's airway if level of consciousness is decreased.

    b. Use direct pressure for all external lacerations. If the bleeding does not stop, the caller should apply more pressure to the bleeding site.

    c. Treat for shock:

        1) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.

        2) Keep patient warm.

        3) DO NOT GIVE PATIENT FOOD OR DRINK.

    d. For nose bleeds instruct the caller to pinch the nose between the thumb and finger and apply pressure in this way. Have the patient sit forward and attempt to spit the blood out (swallowing it will make the patient nauseous).

    e. Call back if the patient's condition changes before help arrives.

    f. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

    a. Lacerations or hemorrhages in the head and facial areas in children may be serious bleeds because children have a smaller total circulating blood volume

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than adults and because these areas are very well supplied with blood and make up a larger portion of the body than in adults.

8 - Industrial Accidents (Traumatic Incident Type)

1. Background:

   a. The purpose of this protocol is to identify what the situation is, where the patient is, if the patient is trapped in machinery and direct the caller to have someone meet and guide the responding personnel to the patient.

   b. These cases should be handled as case specific, and if the chief complaint can be identified the EMD may go to a more appropriate protocol for the provision of pre-arrival instructions.

   c. These calls are most often third party calls.

   d. Enclosed spaces present grave danger where chemicals or gases may be present. These are most common in industrial or farm settings. The offending agent may not be obvious. Rescue should only be attempted by trained rescue personnel.

2. Common Causes:

   a. Industrial traumatic incidents and entrapments in machinery

   b. Common medical incident types such as abdominal pain, chest pain, diabetic problems, etc.

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    c. Reaction or exposure to chemicals or gases in the environment.

3. Common Symptoms Described by Caller (presentation)

    a. Case specific. Often all that is known is that an ambulance is needed at a particular location.

4. Instructions Commonly Provided:

    a. Advise callers not to go into enclosed spaces to retrieve or treat the victim due to the possible presence of noxious or dangerous fumes.

    b. The call often comes in from a security office or factory medical clinic. If the call comes from the security office of some location remote from the patient, it is very important to have them direct someone to meet the responders and guide them to the patient.

    c. Case specific pre-arrival instructions should be given if the chief complaint is identified.

    d. If the patient is trapped in machinery the machinery should be shut off.

    e. Do not move the patient or splint the injuries.

    f. Control of external bleeding with direct pressure and treat for shock if symptoms are present.

    g. Obtain and relay pertinent information regarding previous medical history and cause of incident if possible.

h. Treat for shock:

  1) Control bleeding.

  2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.

  3) Keep patient warm.

  4) DO NOT GIVE PATIENT FOOD OR DRINK.

i. Lock all pets (in this case guard dogs) away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations: - NONE

9 - Stabbing/Gunshot Victim (Traumatic Incident Type)

1. Background:

  a. This protocol deals with penetrating trauma of any kind.

  b. Penetrating trauma to the extremities is not as serious as penetrating trauma to the torso (or central core).

  Penetrating traumas below the knees and elbows are not as serious as those above these areas of the extremities.

  c. The safety of the scene is critical to determine and relay to the responding personnel.

    - d. The EMD should attempt to determine if there is a weapon at the scene or if the assailant is nearby.
    - e. The EMD should also determine when the incident occurred.

2. Common Causes:
    - a. Self-explanatory

3. Common Symptoms Described by Caller (presentation)
    - a. Callers reporting these incidents often have an emotional response to the situation. Proper calming techniques should be used.
    - b. Visible external bleeding.
    - c. Multiple victims.
    - d. Unconscious patient.

4. Instructions Commonly Provided:
    - a. Advise callers to remain safe. Do not approach scene if the assailant is presumed to be present.
    - b. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
    - c. Use direct pressure to control external bleeding.
    - d. Treat for shock:
        - 1) Control bleeding.

        2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.

        3) Keep patient warm.

        4) DO NOT GIVE PATIENT FOOD OR DRINK.

    e. Do not pull out penetrating objects.

    f. Do not disturb the scene or remove weapons.

    g. Gather or list the patient's medication for the doctor.

    h. Call back if the patient's condition changes before help arrives.

    i. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

    a. A child with a penetrating injury is highly likely to require surgery. Make sure that children in your system have access to a facility with staff (emergency department, surgeon, anesthesiologist, nursing, intensive care unit, laboratory, etc.) familiar with critically ill or injured children, as well as the means to get there in a timely fashion.

10 - Traumatic Injuries (Traumatic Incident Type)

1. Background:

    a. This protocol is used for specific, identifiable injuries.

  - b. The focus of this protocol is to keep the patient still and to provide information so as to not cause any further injury to the patient.

2. Common Causes:
   - a. Fractures, dislocations, minor contusions and abrasions, etc.
   - b Falls resulting in some specific trauma other than to the back.

3. Common Symptoms Described by Caller (presentation)
   - a. Fractures, pain and swelling, immobility.
   - b. Back pain, numbness, tingling or immobility of the extremities. In this case a spinal injury should be assumed and spinal precautions taken.
   - c. External bleeding.

4. Instructions Commonly Provided:
   - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
   - b. Treat for shock:
     - 1) Control bleeding.
     - 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
     - 3) Keep patient warm.

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4) DO NOT GIVE PATIENT FOOD OR DRINK.

c. Do not move the patient or splint any injuries.

d. Call back if the patient's condition changes before help arrives.

e. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

a. The alert injured child should be kept with a familiar adult if possible.

b. Injuries which look like sprains in children may involve the noncalcified portion of the bone called the "***growth plate.***" If the growth plate of a particular bone is injured, there may be a difference in final bone length or growth compared with the other side. Children who complain of hip, groin, or knee pain after a trivial injury may have a slippage of the bone through the growth plate of the femur (thigh bone). Further weight bearing may increase the slippage. Such children should be kept off their feet until evaluated even though they may be able to bear weight.

11 - Vehicle Related Injuries (Traumatic Incident Type)

1. Background:

a. This protocol is used in cases of injury caused by vehicles like automobile collisions, auto-pedestrian incidents, auto-motorcycle and bicycle collisions.

b. Due to the third party nature of these calls information regarding how many patients, if there are any visible injuries, and the mechanisms of the accident are helpful to elicit from the caller and relay to the responding personnel.

c. Additional information of use includes if any one has been thrown from the vehicle or if there is chemical spill involved. If a chemical spill has occurred this information should be relayed, along with the type of chemical involved, to HAZMAT personnel.

d. Often motor vehicle collisions resulting in serious injury or death are treated as crime scenes. Check with your local regulations about what to do about these situations.

2. Common Causes:

   a. Self explanatory.

3. Common Symptoms Described by Caller (presentation)

   a. Multiple calls for the same collision. Callers may offer different accounts of the accident. Dispatch of appropriate resources should follow established in-house operating procedures.

   b. Multiple patients, patients thrown, roll-overs and numerous other descriptions of the like.

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c. Auto-pedestrian, auto-motorcycle and auto-bicycle collisions should always be considered high level emergencies.

4. Instructions Commonly Provided:

   a. Treat for shock:

      1) Control bleeding.

      2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.

      3) Keep patient warm.

      4) DO NOT GIVE PATIENT FOOD OR DRINK.

   b. Do not move the patient(s) unless they are in danger.

   c. Do not splint any injuries.

   d. Ensure that the patient(s) have an open airway and monitor the patient's level of consciousness.

   e. Call back if the patient's condition changes before help arrives.

   f. Treat collision as potential crime scene until law enforcement arrives. Check with local regulations on how to deal with collision crime scenes.

   g. Lock all pets away because they may interfere with instructions given or attack responding personnel.

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5. Special Pediatric Considerations:

Vehicle-Child injuries will tend to be worse than Vehicle-Adult injuries for the following reasons:

a. children tend to turn and face the oncoming car (resulting in frontal injuries) while adults tend to turn away (resulting in less life threatening back injuries) and

b. children's height tends to put their vital organs at about the same level as the bumper of the approaching vehicle, making the resulting injuries that much worse.

c. If multiple family members are involved in a vehicle crash, it is helpful to be able to transport the child with at least one familiar adult family member if possible.

d. Policies for extrication of children in car seats should reflect the most recent NHTSA guidelines.

Individual Chief Complaint Protocols. Following is a detailed review of the fourteen Individual Chief Complaint protocols. Your instructor will provide additional information about these, and then you will be given the opportunity to practice using your local EMDPRS for the protocol that corresponds to the chief complaint.

1 - Abdominal Pain (Individual Chief Complaint)

1. Background:

    a. Most abdominal pain is non-urgent in nature. There are some critical situations that can be identified with proper questioning from the EMD using the EMDPRS.

    b. Sometimes, patients experiencing cardiac events such as myocardial infarction (M.I.) will describe the pain as in their upper abdomen.

    c. Women of childbearing age range may be having abdominal pain due to an ectopic pregnancy. This is often accompanied by signs and symptoms of shock from internal bleeding if the fallopian tube has ruptured.

    d. Abdominal pain can be acute or chronic. In either case the key to a proper response is determining the age, history and symptoms the patient is presently exhibiting, particularly identifying the existence of chest pain or fainting (in females of child bearing age range).

    e. The severity and duration of the pain often do not relate to the severity of the problem.

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f. Patients over the age of 50, complaining of lower back pain with no history of injury or chronic back problems or if they are exhibiting signs of shock should be considered as experiencing abdominal aortic aneurysms and be dealt with as an emergency.

2. Common Causes:

a. Most critical causes of abdominal pain include:

1) myocardial infarction (symptoms include high abdominal pain (like indigestion);

2) abdominal aortic aneurysm (symptoms include abdominal pain associated with back pain, sweating, fainting, symptoms of shock, dizziness) and

3) ectopic pregnancy (lower abdominal pain; signs of shock and may or may not have missed a period).

b. Moderately serious causes of abdominal pain include simple appendicitis, bowel obstruction (usually found in the elderly), perforated gastric ulcers, kidney stones and chronic illnesses involving the abdominal organs.

c. Least critical causes of abdominal pain include gastritis, gastroenteritis, pelvic inflammatory disease, gastric ulcers, flu type maladies and gas.

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3. Common Symptoms Described by Caller (presentation)
   - a. Sharp stabbing pains, localized or covering the abdomen generally.
   - b. Abdominal distention or bloating.
   - c. Nausea, vomiting, diarrhea.
   - d. Pallor, sweating, fainting, light-headedness.
4. Instructions Commonly Provided:
   - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting.
   - b. Allow patient to assume a comfortable position.
   - c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
   - d. Treat for shock:
     - 1) Keep airway clear.
     - 2) DO NOT GIVE FOOD OR DRINK.
     - 3) Let patient assume a position of comfort.
     - 4) Calm and reassure patient.
     - 5) Keep the patient warm (maintain body temperature).
   - e. Gather or list the patient's medication for the doctor.

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f. Call back if the patient's condition changes before help arrives.

g. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

a. Abdominal pain in the pediatric patient is rarely a symptom of a critical event. It is worth considering three special situations that require rapid response.

1) Parents will sometimes attribute persistent irritability or crying in their infant to abdominal pain and may contact EMS out of alarm or because they can no longer tolerate the crying. Irritable or colicky infants may be at increased risk of child abuse.

2) Young boys with torsion (twisting) of the testicle may report only abdominal pain (either because the pain is referred to the abdomen or out of modesty). Failure to reverse the testicular torsion rapidly and restore the blood supply may result in the loss of reproductive function in that testicle.

3) Because infants and children cannot always describe or communicate their symptoms, moderately serious causes of abdominal pain may not receive attention as quickly as they might in an adult, and may therefore be complicated by

shock, peritonitis, and bowel necrosis (tissue death).

b. Moderately serious causes of abdominal pain in children include appendicitis (often ruptured before diagnosed in young children), kidney stones or bowel obstruction like intussusception (telescoping of the bowel on itself) or volvulus (twisting of the bowel on itself). Vomiting that is green or yellow may contain bile and should be considered a sign of intestinal obstruction. If there has been considerable vomiting, the abdominal pain may be complicated by dehydration.

c. Children may also complain of abdominal pain with strep throat, pneumonia, and simple gastroenteritis, constipation or gas.

2 - Allergies/Stings (Individual Chief Complaint)

1. Background:

a. An allergic reaction represents the body's adverse reaction to a foreign substance (antigen): In most cases allergic reactions are very minor.

b. Some individuals have severe allergies to one or more substances and can have a very severe reaction (anaphylactic shock).

c. The most important symptoms to identify in all reported cases of an allergic reaction are the existence of difficulty breathing or swallowing.

d. Anaphylactic shock is the most critical allergic reaction.

e. Anaphylactic shock is of sudden onset. Hives, rashes or itching that have been present for over an hour without difficulty breathing or swallowing are unlikely to progress into anaphylaxis.

2. Common Causes:

a. It is important to remember that a patient could be allergic to anything, therefore the EMD should evaluate critical symptoms and not try to determine the cause of the reaction.

b. Individuals are most commonly allergic to bee stings and other insect bites, seafood (particularly shellfish), nuts, berries and medication such as injected penicillin.

3. Common Symptoms Described by Caller (presentation)

a. In more severe cases the caller may report sudden collapse, difficulty breathing and/or swallowing, excessive salivation, unconsciousness and respiratory arrest.

b. Anaphylactic shock may have some or all of the symptoms mentioned in 3.a. These symptoms will occur within one hour of the exposure in most cases.

c. Minor symptoms may include a rash, swelling, hives, itching, abdominal pain and nausea. If these symptoms have been present for over one hour

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they are very unlikely to progress into anaphylaxis.

d. *If the caller reports that the patient has a history of allergies and has had these reactions before,* **believe them!** They may indicate that the patient has been provided a self injectable medication, usually adrenaline or epinephrine. The EMD should tell the caller to have the patient "do what the doctor told you to do."

4. Instructions Commonly Provided:

    a. Monitor and maintain patient's airway, especially if patient is showing redness and/or swelling around the eyes, nose and mouth or having difficulty breathing or swallowing or has a decreasing level of consciousness.

    b. If the patient's condition seems to be worsening, keep the caller on the phone and be prepared to initiate telephone CPR.

    c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

    d. Treat for shock:

        1) Keep airway clear.

        2) DO NOT GIVE FOOD OR DRINK.

        3) Let patient assume a position of comfort.

        4) Calm and reassure patient.

5) Keep the patient warm (maintain body temperature).

e. Unconscious patients should be placed on their side and their airways maintained. The EMD should constantly monitor the patient's airway and breathing status if the patient becomes unconscious.

f. The EMD should tell the caller to have the patient "do what the doctor told you to do".

g. Gather or list the patient's medications for the doctor.

h. Call back if the patient's condition changes before help arrives.

i. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

a. Respiratory symptoms from allergic reactions can progress very rapidly in children to partial or complete airway obstruction and respiratory arrest, because their smaller airways can become obstructed with smaller degrees of swelling. Unsuspected allergic reaction to a sting or food item can be the cause of sudden unconsciousness in the child.

3 - Back Pain (Individual Chief Complaint)

1. Background:

a. The incidence of non-traumatic back pain is very common and in most cases represents minor problems. There are some critical situations that can be identified with proper questioning from the EMD using the EMDPRS.

b. Often a patient experiencing a cardiac event such as myocardial infarction (M.I.) will describe the pain as radiating through to their back.

c. Patients over the age of 50, complaining of lower back pain with no history of injury or chronic back problems or if they are exhibiting signs of shock should be considered to be experiencing abdominal aortic aneurysms and be treated as an emergency.

d. Back pain may be described as either acute or chronic. In either case the key to a proper response is determining the age, history and symptoms the patient is presently exhibiting, particularly identifying the existence of chest pain (in patients over 35) or fainting (in patients over 50).

e. The severity of the pain and the duration of the pain often does not relate to the severity of the problem.

2. Common Causes:

a. Most critical causes of back pain include falls, abdominal aortic aneurysms, thoracic dissections, neurologic problems and M.I.

b. Moderately serious causes of back pain include kidney stones, rib and spinal fractures (if traumatically induced).

c. Least critical causes of back pain include chronic low back pain, vertebral disc disease, kidney infections and sprained backs.

3. Common Symptoms Described by Caller (presentation)

   a. Sharp stabbing pains, localized or covering the abdomen generally.

   b. Abdominal distention or bloating.

   c. Nausea, vomiting, diarrhea.

   d. Pallor, sweating, fainting light-headedness.

   e. Numbness or tingling in the extremities.

4. Instructions Commonly Provided:

   a. Monitor and maintain patient's airway, especially if patient is nauseous or vomiting.

   b. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

   c. Treat for shock:

      1) Keep airway clear.

      2) DO NOT GIVE FOOD OR DRINK.

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        3) Let patient assume position of comfort (IN CASES OF TRAUMATIC BACK PAIN, THE PATIENT SHOULD NOT BE MOVED);

        4) Calm and reassure patient and

        5) Keep the patient warm (maintain body temperature).

    d. Gather or list the patient's medications for the doctor.

    e. Call back if the patient's condition changes before help arrives.

    f. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations: - NONE

4 - Breathing Problems (Individual Chief Complaint)

1. Background:

    a. Breathing problems are usually more severe in the very young and the very old.

    b. Often a patient experiencing a cardiac event such as myocardial infarction (M.I.) will complain of difficulty breathing.

    c. Breathing problems should always be considered a high level medical emergency.

    d. The previous medical history should be relayed to the responding units.

NOTE: People who call you reporting breathing problems represent one of the most difficult calls you will have to deal with. What may be one person's distress could be another's chronic breathing problem (that they have to deal with daily).

What's most important is that you try to determine what has changed about the person's breathing that prompted to caller to call for help.

2. Common Causes:
    a. Primary breathing problems having to do with the lungs (lower respiratory system) include asthma, pneumonia, drug overdose, emphysema, pulmonary embolus, congestive heart failure and acute pulmonary edema.
    b. Secondary breathing problems having to do with the upper airway include croup, choking, epiglotittis and partial airway obstructions.
    c. Tertiary breathing problems caused by an unrelated illness or incident include hyperventilation syndrome, stroke (CVA), diabetic ketoacidosis, seizures, cardiac arrest, and in some cases severe facial trauma.
3. Common Symptoms Described by Caller (presentation)
    a. Difficulty breathing, wheezing, shortness of breath, noisy breathing, "fighting for air," gasping for air, etc.

b. Anxiety, change in skin color, impending feeling of "impending doom."

c. Excessive coughing

4. Instructions Commonly Provided:

a. Monitor and maintain patient's airway, especially if patient is nauseous or vomiting.

b. Calm and reassure the patient. Tell the patient to relax and slow their breathing, blow the air out and encourage the patient to breath with you.

c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

d. Treat for shock:

1) Keep airway clear.

2) DO NOT GIVE FOOD OR DRINK.

3) Let patient assume position of comfort (usually sitting-up).

4) Calm and reassure patient.

5) Keep the patient warm (maintain body temperature).

e. Gather or list the patient's medication for the doctor.

f. Call back if the patient's condition changes before help arrives.

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g. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

a. *Breathing problems are the most common pediatric medical problem encountered by the EMD* and can be critical. Air passages are smaller than in the adult, and therefore problems will be more acute. Airway obstruction happens more commonly in infants and children than in adults. Infants may not learn to breath through their mouths until as late as nine months of age, therefore, simple nasal congestion of a cold is capable of causing significant respiratory distress in the infant. In addition to the signs and symptoms listed above, consider the presence of head bobbing, grunting (a sound made in expiration with each breath) flaring of the nostrils and retracting of the skin with each breath at the clavicles, ribs and diaphragm as signs of advancing respiratory distress.

b. Although the incidence of epiglottitis has marked declined since the use of a vaccine to prevent the usual bacteria responsible, it remains a true respiratory emergency. The hallmark presenting sign is usually marked throat pain to the point of being unable to swallow (drooling), fever and rapidly progressing respiratory distress in a febrile child who assumes a "tripod" sitting position with his/her neck flexed and head extended (the "sniffing" position). The child with suspected epiglottitis, and all children with suspected upper airway obstruction, should be allowed to

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assume the position of comfort, kept calm, not separated from his or her parent and brought to medical attention as soon as possible.

5 - Chest Pain (Individual Chief Complaint)

1. Background:
    - a. Chest pain often is caused by a blockage of one or more of the coronary arteries. This blocks the oxygen delivery to a portion of the heart muscle and causes chest pain.
    - b. Often a patient experiencing a cardiac event such as myocardial infarction (M.I.) will describe the pain as in their upper abdomen.
    - c. The average age of the onset of symptomatic cardiac disease is 35 years old for males and 40 years for females. Any male patient 35 or older or female 40 or older complaining of abdominal pain should be considered a possible cardiac event.
    - d. Any patient over the age of 35 complaining of chest pain should be considered a cardiac event.
    - e. Patients with prior histories of cardiac problems may represent a higher critical problem.
2. Common Causes:
    - a. Most critical causes of chest pain include heart attack (myocardial infarction or M.I.) and a dissecting

thoracic aortic dissection (aneurism in the chest).

b. Potentially critical problems causing chest pain include pulmonary embolisms (blood clot in the lungs) and pericarditis (infection of the tissues surrounding the heart).

c. Least critical causes of chest pain include pleurisy, pneumonia, esophagitis, hiatal hernias, viral illnesses, rib injuries, muscle strains and "shingles."

3. Common Symptoms Described by Caller (presentation)

a. Chest pain that is related to a problem with the respiratory system or lungs is usually described as a sharp stabbing pain that increases or decreases with respirations.

b. Chest pain associated with a heart attack or M.I. is often described as a dull crushing pain or a pressure sensation that may radiate to the neck, jaw and/or left arm (similar to angina).

The patient often experiences a change in skin color (ashen gray or pale) and they often experience severe sweating (diaphoresis). The patient may be nauseous, vomiting and have difficulty breathing. They often are very anxious and have a "feeling of impending doom."

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4. Instructions Commonly Provided:

    a. Monitor and maintain patient's airway, especially if patient is nauseous or vomiting.

    b. Allow patient to assume a comfortable position, usually sitting up to aid in respirations.

    c. The patient may report that they have been given medication to take when they experience chest pain. If they ask the EMD what they should do, the EMD should advise the caller to have the patient do what their doctor told them to do. If the patient has taken any medication, this information should be relayed to the responding units.

    d. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

    e. Treat for shock:

        1) Keep airway clear.

        2) DO NOT GIVE FOOD OR DRINK.

        3) Let patient assume position of comfort.

        4) Calm and reassure patient.

        5) Keep the patient warm (maintain body temperature).

    f. Have first-party callers stay on the phone, or if the patient has an altered level of consciousness, or if callers state that they feel as if they "are going to die."

    g. Gather or list the patient's medications for the doctor.

    h. Call back if the patient's condition changes before help arrives.

    i. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

    a. Chest pain is a common symptom in young adolescents, but unusual in younger children and when present is extremely unlikely to be due to myocardial infarction. Spontaneous pneumothorax, air leak from an acute asthmatic attack, and pulmonary embolus do occur in the pediatric population.

    b. Because it is not commonly recognized, pulmonary embolus has a much higher case fatality rate in children than in adults. The child with chest pain, fast heart and breathing rate and any of the following can be considered at risk for pulmonary embolus:

        1) obesity

        2) birth control pills

        3) dehydration

        4) nephrotic syndrome

        5) family history of clotting problems

        6) recent long bone fracture and

7) prolonged bedrest or inactivity.

6 - Convulsion/Seizure (Individual Chief Complaint)

1. Background:

   a. A convulsion or seizure is believed to be caused by a misfiring of nerve cells in the brain either as a result of injury, lack of oxygen or disease.

   b. Patients going into cardiac arrest occasionally will have a brief, anoxic seizure due to the brain being robbed of oxygen. It is often an initial sign of cardiac arrest. Seizure patients over 35 whose breathing cannot be verified should be considered cardiac arrests until breathing can be confirmed.

   c. There are many types of seizures including grand mal, petit mal, psychomotor, focal motor and jacksonian. All present themselves in a different fashion. The most common by far is the grand mal.

   d. Ninety-five percent of all seizure patients with an unknown history have been diagnosed with epilepsy.

   e. Seizures associated with fever (febrile seizures) in children under 6 are common. They are usually short in duration (less than 15 minutes), self-limited, and rarely cause respiratory or cardiac compromise. It is unusual for febrile seizures to require medication in the field and they do not indicate that the child has epilepsy.

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- f. CPR should not be performed on a seizure patient unless the pulse is not present.
- g. Once the seizure has stopped, maintaining an open and clear airway is the most important thing the EMD can do for the seizure patient.
- h. Most seizures last approximately 45-60 seconds. Anoxic seizures resulting from cardiac arrest are usually much shorter. After the seizure stops, the patient is normally unconscious and in what is referred to as a "post-ictal" state. This condition usually last less that 15 minutes and may be longer for some patients. Once the seizure has ended, the patient experiences excessive salivation and may have a great deal of oral secretions. This is the time when airway maintenance is crucial.
- i. Patients reported to be having continuous or multiple seizures represent a much higher medical emergency.
- j. Some epileptic patients can tell when they are going to have a seizure and may have someone call for help before the seizure starts. This is called an "aura."

2. Common Causes:

    - a. Epilepsy, trauma to the head, brain or intra-cranial tumors, meningitis, cardiac arrest, anoxia (lack of oxygen), fever, and many other causes. Anything that disrupts the normal functioning of the brain has the potential to cause a seizure.

3. Common Symptoms Described by Caller: (presentation)
    a. Sudden stiffening and jerking movements over the entire body. The caller may describe the patient as arching their back and perhaps crying out just before the seizure.
    b. Bluing or discoloration of the skin during seizure.
    c. Snoring or gurgling after the seizure is over. This indicates a possible compromise in the airway.
4. Instructions Commonly Provided:
    a. Monitor and maintain patient's airway after the seizure. Gently roll the patient on their side and clear out the mouth to clear the airway.
    b. Do not attempt to hold the patient down during the seizure.
    c. Do not perform CPR while the patient is jerking.
    d. Do not attempt to place anything in the mouth while patient is seizing to prevent them from biting or "swallowing" the tongue.
    e. Do not let the patient get up or wander around after the seizure, as they may not be fully conscious.

f. Move dangerous objects away from the patient during the seizure to prevent injury.

g. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

h. Treat for shock:

   1) Keep airway clear.

   2) DO NOT GIVE FOOD OR DRINK.

   3) Let patient assume position of comfort.

   4) Calm and reassure patient.

   5) Keep the patient warm (maintain body temperature).

i. Gather or list the patient's medications for the doctor.

j. Call back if the patient's condition changes before help arrives.

k. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

   a. Seizures in children are common and a common reason for calling EMS. Although many childhood seizures will be found to be simple febrile seizures, epilepsy is common in childhood.

   b. Status epilepticus is a series of consecutive seizures or continuous seizure activity in which the child does

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not regain consciousness between seizures.

c. Prolonged seizures can cause brain damage, especially if associated with either low blood and brain levels of glucose and oxygen.

d. Seizure activity may be subtle, and can look like limpness, eye rolling or blinking, chewing or mouthing motions, cycling movements of the legs, as well as the more easily identified tonic-clonic shaking of extremities. It is helpful for the bystander and the EMS providers to note any asymmetry of movement, including eye deviation.

7 - Diabetic Problems (Individual Chief Complaint)

1. Background:

a. Diabetes is a condition that prevents the body from correctly metabolizing sugar into energy. The body lacks the ability to produce correct amounts of insulin, the hormone that aids in sugar metabolism. This requires the diabetic patient, in many cases, to have to take insulin.

b. When a diabetic fails to take their insulin they will have a gradual rise in their blood sugar levels. This is a slow onset and results in diabetic ketoacidosis. Ketoacids are a toxic byproduct of this. The body tries to eliminate these toxins through the respiratory system, and the patient may be described as breathing very deeply. The ketoacids can be detected on the patients breath as a fruity or sweet smell. The patient may become very ill with flu like symptoms. If this goes unchecked the patient may progress into diabetic coma, a state of unconsciousness caused by extremely high blood sugar levels. Patients often seek medical attention prior to this occurring.

c. When an insulin dependent diabetic takes too much insulin or takes their regular dose and engages in higher levels of activity or fails to eat, the insulin depletes the body's available blood sugar, and the patient experiences a rapid decrease in consciousness. This condition is known as insulin shock. It has a rapid onset with the level of consciousness decreasing until the patient is unconscious. This is by far the most common diabetic emergency faced by EMS.

d. Due to the high reliability of the family's reporting of an insulin reaction or diabetic problem, this protocol should be accessed if the caller indicates that it is a diabetic emergency.

e. The main thing for the EMD to be concerned with is maintaining the patients airway if their level of consciousness is decreased.

f. The EMD should attempt to obtain and relay information regarding the history of the patient.

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2. Common Causes:

a. As noted previously.

3. Common Symptoms Described by Caller (presentation)

    a. As noted previously.

4. Instructions Commonly Provided:

    a. Monitor and maintain patient's airway, especially if patient's level of consciousness is decreased or if they are unconscious.

    b. Allow patient to assume a comfortable position.

    c. Administration of sugar or soda-pop to a diabetic patient is left up to local medical control. This is because doing so alters the assessment of the patient by responding personnel and may not have any noticeable effect on the patient's level of consciousness. ***You need to check your local regulations on the administration of sugar to diabetics.***

    d. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

    e. Treat for shock:

        1) Keep airway clear.

        2) DO NOT GIVE FOOD OR DRINK.

        3) Let patient assume position of comfort.

        4) Calm and reassure patient.

        5) Keep the patient warm (maintain body temperature).

f. Gather or list the patient's medications for the doctor.

g. Call back if the patient's condition changes before help arrives.

h. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

   a. Some children with diabetes have been provided with glucagon, a medication which can be given as a shot to raise blood sugar if the child becomes unconscious or begins seizing with insulin shock. If the caller is able to administer glucagon during such episodes, the EMD should advise that it be given "as your doctor has directed you."

8 - Headache (Individual Chief Complaint)

1. Background:

   a. Since the brain is the organ of concern in patients reporting headache the primary focus of the EMD should be changes in the patient's alertness (level of consciousness) and speech and motor problems. Both indicate more serious causes.

   b. Sudden severe onset of pain may suggest a more serious underlying cause as well (subarachnoid and subdural hemorrhage).

    c. Most other headaches such as migraine, tension, sinus etc. are less serious in nature. EMS is not commonly called for these complaints.

2. Common Causes:

    a. Most serious causes of headaches include: meningitis; subdural hematomas and subarachnoid hemorrhage. These are usually reported as having started as a sudden severe onset of pain and are often associated with speech and/or motor problems.

    b. Moderately serious causes include migraines, cluster and other vascular headaches.

    c. Minor causes of headaches include tension, sinus headaches (the common headache) and intracerebral bleeding due to hypertension.

3. Common Symptoms Described by Caller (presentation)

    a. Sudden severe onset of pain associated with speech or motor problems should be considered more serious than a simple complaint of headache without any other symptoms.

    b. History of migraines. The patient may be nauseated and vomiting and be incapacitated with pain.

4. Instructions Commonly Provided:

   a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting.

   b. Allow patient to assume a comfortable position.

   c. Do not give the patient anything to eat or drink.

   d. Gather or list the patient's medications for the doctor.

   e. Call back if the patient's condition changes before help arrives.

   f. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

   a. Meningitis is more common in children than adults and is potentially contagious. If the symptoms described include fever, respiratory precautions should be advised for the EMS team dispatched.

9 - Heart Problems (Individual Chief Complaint)

1. Background:

   a. This complaint represents a diagnosis rather than a chief complaint. The EMD must concentrate on looking for symptoms from the caller rather than a presumed diagnosis.

b. The EMD should attempt to determine if chest pain is present and then proceed to the appropriate protocol for that specific chief complaint.

c. The EMD should attempt to gain information regarding previous medical or cardiac history. The patient may have an implanted defibrillator or pacemaker that has malfunctioned. These complaints may not always be associated with classic cardiac symptoms.

d. If, after all questioning, the patient is without symptoms, the EMD may attempt to have the caller get a pulse rate on the patient. Many heart problems are manifested by a rapid heart rate. An adult with a resting heart rate of over 140 may be having a heart problem. Slow heart rates can cause decreased consciousness. Any heart rate less than 40 is also cause for concern.

e. Congestive heart failure may present itself as breathing difficulty, weakness, sweating and the caller may report to you that the patient has been on typical heart medications (like diuretics).

2. Common Causes:

   a. Electrical malfunctions of the heart resulting in irregular or rapid heart rates.

   b. Acute myocardial infarction.

   c. Malfunctioning internal defibrillators.

3. Common Symptoms Described by Caller (presentation)

   a. Firing internal defibrillator.

   b. Chest pain, difficulty breathing and other cardiac related symptoms.

   c. Irregular or rapid heart rate. Often described as "palpitations".

4. Instructions Commonly Provided:

   a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting.

   b. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

   c. Treat for shock:

      1) Keep airway clear.

      2) DO NOT GIVE FOOD OR DRINK.

      3) Let patient assume position of comfort.

      4) Calm and reassure patient.

      5) Keep the patient warm (maintain body temperature).

   d. Gather or list the patient's medications for the doctor.

   e. Call back if the patient's condition changes before help arrives.

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f. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

a. Common causes of pediatric heart problems include congenital abnormalities of the heart that can cause congestive heart failure or cyanosis and rhythm disturbances, particularly very fast heart rates above 200. Symptoms in the infant and child include those mentioned, as well as poor feeding and change in color or activity level.

10 - Ingestions/Poisons/O.D. (Individual Chief Complaint)

1. Background:

a. An overdose, as defined for dispatch, is a purposeful and intentional ingestion involving any patient over the age of 12 years old. The patient also has a motive for their actions.

b. An accidental ingestion is defined as an accidental, or unintentional, intake by a child under the age of 12.

c. A poisoning is defined as an accidental intake of a toxic substance, usually by a child under the age of 12.

d. All overdose patients should be considered a possible danger to themselves and others. The safety of the scene must be addressed during questioning.

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e. Access to the local poison control intervention line should be established and accessed, when appropriate, according to local policies and procedures.

2. Common Causes:

   a. Accidental ingestions at home are common in children and the elderly (confusion with medication).

   b. Overdoses are related to depression, either as a gesture for help or as a serious suicide attempt.

   c. Poisonings occurring in the home usually involve a small child who has ingested a family member's medications or some toxic/caustic substance.

3. Common Symptoms Described by Caller (presentation)

   a. Normally described as noted previously.

4. Instructions Commonly Provided:

   a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.

   b. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

   c. Treat for shock:

      1) Keep airway clear.

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2) Let patient assume position of comfort.

3) Calm and reassure patient.

4) Keep the patient warm (maintain body temperature).

d. In cases of poisoning, do not induce vomiting. If caustic ingestion, have patient drink water or milk until help arrives (CHECK WITH POISON CONTROL CONSULTANTS FIRST, UNLESS OTHERWISE INDICATED IN YOUR EMDPRS).

e. Do not give the patient anything to eat or drink except in cases of a caustic ingestion of an acid or lye.

f. Protect the patient from further injury to themselves if safe to do so.

g. Contact poison control if ingestion is accidental and the patient is free of symptoms.

h. Call back if the patient's condition changes before help arrives or if the patient leaves the scene.

i. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

a. Poisoning is the most common cause of non-fatal injury in the home. The most common serious poisonings in children involve caustics, hydrocarbon/petroleum, iron (medicinal),

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antidepressant and cardiac medications.

11 - Psychiatric/Behavioral (Individual Chief Complaint)

1. Background:

   a. Psychiatric or behavioral problems can relate to a diagnosed problem such as schizophrenia, mania, depression, etc.

   b. Underlying medical problems often are mistaken for behavioral problems. In diabetics or epileptics, their lowered level of consciousness during or after manifestation may be mistaken for a psychiatric or behavioral problem. Attempt to determine medical history.

   c. All patients exhibiting psychiatric/behavioral problems should be considered a potential danger to themselves and others.

   d. It should be determined if the patient has a weapon.

   e. If the patient has attempted suicide, the specific EMDPRS chief complaint protocol should be accessed in the EMDPRS and followed to treat the reported situation.

   f. The EMD may want to check if resources exist for crisis intervention.

2. Common Causes:

   a. As described previously.

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3. Common Symptoms Described by Caller (presentation)
    a. Patient exhibiting abnormal or unusual behavior.
    b. Patient threatening violence.
    c. Patient threatening suicide.
    d. Depression.
4. Instructions Commonly Provided:
    a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
    b. Attempt to protect the patient from themselves.
    c. Attempt to lay the patient down and calm him/her.
    d. Do not give the patient anything to eat or drink.
    e. Gather or list the patient's medication for the doctor.
    f. Call back if the patient's condition changes or if the patient leaves the scene before help arrives.
    g. If available, Crisis Intervention should be contacted. Check with your agency about local regulations on using Crisis Intervention.
    h. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

   a. In children under 8, many episodes of altered behavior of possible psychiatric origin will in fact be related to underlying toxic exposure, neurologic event or infection, or child abuse.

12 - Sick Person (Individual Chief Complaint)

1. Background:

   a. A sick person is a patient who has an undefinable chief complaint, uncategorizable symptoms or when the caller provides specific information on a previous diagnosis.

   b. This card is accessed when a second party caller reports a diagnosis or some other term to describe what they believe may be the problem.

   c. The function of this protocol is to assist the EMD in identifying the chief complaint or some other significant symptom or medical history, rather than rely on the caller's presumed diagnosis.

2. Common Causes:

   a. Any illness or malady could potentially be handled on this protocol.

3. Common Symptoms Described by Caller: (presentation)

   a. Callers often will relate a previous diagnosis.

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b. Nausea, vomiting, weakness, dehydration.

c. These patients have the potential to be very ill, as in the case of a terminally ill patient. Calm and reassure the caller who may have had an emotional response to the situation.

d. If a specific chief complaint is identified the EMD should use the EMDPRS protocol that suits the patient's chief complaint.

4. Instructions Commonly Provided:

   a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.

   b. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

   c. Treat for shock:

      1) Keep airway clear.

      2) DO NOT GIVE FOOD OR DRINK.

      3) Let patient assume position of comfort.

      4) Calm and reassure patient.

      5) Keep the patient warm (maintain body temperature).

   d. Gather or list the patient's medications for the doctor.

e. Call back if the patient's condition changes before help arrives.

f. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

a. Children with a pre-existing diagnosis are much more likely than healthy children to have a medical event requiring EMS. Some agencies maintain a roster of children in the community with special or pre-existing health care needs whose safety network relies upon a knowledgeable EMS system familiar with the child's condition, usual complications, emergency treatment, and usual site of emergency and chronic care. Parents and caregivers of such children have frequently been equipped with such information and can assist EMS in such situations.

b. It can be difficult to tell whether a child is having an emergency or not. The younger the child, the more vague or nonspecific may be the signs of illness; irritability, crying, vomiting, fever, and lethargy are symptoms that may accompany a wide range of pediatric conditions, many trivial, some life-threatening. Behind the complaint "something is wrong with my child" ("sick, hurt, crying") may be an unsuspected foreign body in the esophagus, intussusception, meningitis, child abuse, or a simple ear infection. Behind the complaint, "my baby had a spell where she was blue, pale, not breathing, unresponsive..." may be

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something as simple as regurgitation or as complex as seizure, heart rhythm disturbance, apnea or sepsis. Because the symptoms are nonspecific, even the experienced pediatric provider will sometimes have difficulty discriminating between these conditions in person, let alone over the phone. Over-triage is an acceptable response to this ambiguity.

13 - Stroke/CVA (Individual Chief Complaint)

1. Background:
   a. A stroke, or cerebral vascular accident (CVA) denotes a situation where the blood flow has been interrupted to a portion of the brain due to a blood clot, hypertension-induced intracerebral hemorrhage or a ruptured aneurysm.
   b. Although dramatic, the CVA patient usually is not considered a high level medical emergency. The event is fixed, therefore the treatment is rehabilitative.
2. Common Causes:
   a. Blockage of a cerebral artery.
   b. Ruptured aneurysm.
   c. Dissecting aneurysm.
   d. Intracerebral hemorrhage.

3. Common Symptoms Described by Caller (presentation)
    a. Speech and motor problems. Motor functions diminish on one side of the body.
    b. Numbness and tingling may be present.
    c. History of stroke.
    d. Altered level of consciousness (lower levels of consciousness indicate the event is more severe).
4. Instructions Commonly Provided:
    a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
    b. Allow patient to assume a comfortable position.
    c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.
    d. Treat for shock:
        1) Keep airway clear.
        2) DO NOT GIVE FOOD OR DRINK.
        3) Let patient assume position of comfort.
        4) Calm and reassure patient.
        5) Keep the patient warm (maintain body temperature).

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   e. Gather or list the patient's medications for the doctor.

   f. Call back if the patient's condition changes before help arrives.

   g. The patient may have difficulty walking, do not let them wander around (they could injure themselves further).

   h. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

   a. Symptoms suggestive of a stroke are not common in healthy children but can rarely occur for all the same reasons as in an adult, or because of a complicated migraine. Children with underlying medical conditions like leukemia, renal failure, hemophilia, or metabolic disease are at risk for CVAs. Whoever is attending the child must pay particular attention to the airway in the child.

14 - Unknown/Man Down (Individual Chief Complaint)

1. Background:

   a. These calls are usually third party calls reporting an unknown situation or a man down and appearing to need assistance.

   b. The third party nature of these cases makes it difficult to get valid, comprehensive information from the caller about the patient's condition.

    c. The questions should help to determine if the patient is alive or not. The third party caller can report if the patient was sitting or standing or lying down and if the patient was seen talking or moving at all to help clarify this question.

2. Common Causes:
    a. Intoxication, trauma, underlying medical complaints.
    b. Virtually anything causing the patient to fall and not get up would be handled with this protocol if the caller was a third party (away from the scene and patient).

3. Common Symptoms Described by Caller (presentation)
    a. Man down in the park etc., caller not near the patient and little information available.
    b. Medical assist alarms.

4. Instructions Commonly Provided:
    a. Return to the patient and establish consciousness, airway and breathing. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
    b. Ask the caller if there is a phone or person closer to the patient that could be used so you can get better information.

c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

d. Treat for shock:

  1) Keep airway clear.

  2) DO NOT GIVE FOOD OR DRINK.

  3) Let patient assume position of comfort.

  4) Calm and reassure patient.

  5) Keep the patient warm (maintain body temperature).

e. Watch for and guide the ambulance to the patient.

f. Call back if the patient's condition changes before help arrives.

g. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

  a. Unsuspected allergic reaction should be considered.

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Time/Life-Critical Events. Following is a detailed review of the seven Time/Life Critical Events. Your instructor will provide additional information about these, and then you will be given the opportunity to practice using your local EMDPRS for the protocol that corresponds to the chief complaint.

1 - CO/Inhalation/HAZMAT (Time/Life-Critical Event)

1. Background:
    a. The purpose of this protocol is to identify what the situation is, where the patient is, if the patient is trapped in machinery and direct the caller to have someone meet and guide the responding personnel to the patient.
    b. These cases should be handled as case specific, and if the chief complaint can be identified the EMD may go to a more appropriate protocol for the provision of pre-arrival instructions.
    c. These calls are most often third-party calls.
    d. Enclosed spaces present grave danger where chemicals or gases may be present. These are most common in industrial or farm settings. The offending agent may not be obvious. Rescue should only be attempted by trained rescue personnel.
    e. CO is a colorless odorless gas that is the result of incomplete combustion.

f. Carbon monoxide (CO) poisoning is the most common hazardous material/inhalation complaint encountered in EMS.

g. CO binds with the hemoglobin molecule in the blood stream and displaces oxygen and carbon dioxide. This makes this complaint very urgent in that the patient is possibly suffocating at the cellular level. More severe cases of CO poisoning may require hyperbaric treatment in a decompression chamber in order to provide sufficient energy to break these chemical bonds.

h. Patients can be found in any stage of intoxication. One of the most telling symptoms is the level of consciousness. If the patient is unconscious or has a decreased level of consciousness, they should be assumed to have a severe exposure and immediate transport should be advised.

i. Other inhalation and HAZMAT situations present should also be assumed to be high level emergencies. The EMD should determine the source and type of exposure and advise the caller to remain safe and away from the hazardous environment. If information regarding the type and source of the exposure is obtained, it must be relayed to the responding crews.

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2. Common Causes:

   a. CO poisoning resulting from smoke inhalation, poorly ventilated heating systems, industrial accidents and automobile exhaust systems.

   b. Most other HAZMAT incidents occur in industrial settings or on the highway, secondary to motor vehicle accidents involving chemical spills. The EMD should be aware of local HAZMAT policies in these cases.

3. Common Symptoms Described by Caller (presentation)

   a. Headache, nausea and altered level of consciousness are common CO poisoning complaints

   b. In cases of other inhalations and HAZMAT situations, callers may report respiratory difficulty, burning of the eyes, superficial chemical burns, nausea, vomiting and decreased levels of consciousness.

   c. Multiple victims are commonly present if in an industrial or public location.

4. Instructions Commonly Provided:

   a. Remove patient from hazardous environment **if safe to do so.**

   b. Monitor and maintain patient's airway, especially if patient is described with a decreased level of consciousness or is unconscious.

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c. Irrigate chemical exposures to the skin with water if burns are present.

d. Enclosed spaces present grave danger where chemicals or gases may be present. These are most common in industrial or farm settings. The offending agent may not be obvious. Rescue should only be attempted by trained rescue personnel.

e. Be aware that the patient may have difficulty walking. Discourage ambulation (Don't let them walk around).

f. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

g. Treat for shock:

    1) Keep airway clear.

    2) DO NOT GIVE FOOD OR DRINK.

    3) Let patient assume position of comfort.

    4) Calm and reassure patient.

    5) Keep the patient warm (maintain body temperature).

h. Have someone guide the responding personnel to the patient(s) if in an industrial setting.

i. Call back if the patient's condition changes before help arrives.

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j. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

   a. CO/inhalation events occur in pediatric aged patients usually in a situation with poorly ventilated home heating, prolonged car travel, or house fires. CO poisoning has been implicated in crib death or Sudden Infant Death Syndrome (SIDS). If the exposure involves multiple victims, there may be variable levels of exposure and symptoms. It is helpful to have specific plans or protocols for the transfer of children to hyperbaric treatment facilities.

   b. HAZMAT situations involving children are uncommon, but may involve multiple children if located at a school or day care facility. Any HAZMAT disaster planning should have provisions specific to the management of single or multiple affected children.

2 - Cardiac Arrest (Time/Life-Critical Event)

1. Background:

   a. Cardiac arrest occurs when the heart ceases to produce a productive rhythm, hence no blood is circulated. Respiratory arrest (stopped breathing) usually accompanies cardiac arrests. In this state, patients are defined as "clinically dead."

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    b. Patients in cardiac arrest who have CPR initiated early and continued throughout the response have a better chance for survival.

    c. All patients who are reported to be unconscious and not breathing or who's breathing cannot be verified by a second party caller should be assumed to be in cardiac arrest.

    d. A system of consistent and uniform questioning should be used on all calls to determine if the patient is conscious and breathing and to determine cardiac arrest as soon as possible.

    e. Be certain to determine pulselessness during CPR instruction sequence to avoid chest compressions on patients who are in respiratory arrest only.

    f. Always determine if the patient has choked on something prior to doing CPR. They may need choking instructions to clear the upper airway obstruction.

2. Common Causes:

    a. Ventricular fibrillation, acute myocardial infarction, trauma, chronic illness, electrocution, suffocation, drowning, choking.

3. Common Symptoms Described by Caller (presentation)

    a. Patient unconscious and not breathing, unresponsive.

    b. Patient's color has changed.

c. Patient described as "making funny or strange noises" (a term used by callers to describe agonal or dying respirations).

    1) Agonal respirations are breaths that occur after cardiac arrest and are ineffective in gathering oxygen for the body. They are frequently described as "weak," "heavy," "gasping," "snoring," "gurgling" or "moaning." The rate at which these respirations occur are usually referred to as "weak or heavy," or "every once in a while."

4. Instructions Commonly Provided:

    a. Follow CPR or Choking instructions found in EMDPRS to provide telephone instructions to the caller.

    b. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

    a. Unlike adults, children develop cardiac arrest from a multitude of different causes, 10% of which or less having to do with primary heart problems. You will not commonly deal with pediatric cardiac arrest. When you are called upon to do so, it is helpful to realize that some children presumed to be in full cardiac arrest have respiratory arrest only and that recovery from respiratory arrest can be excellent if effective airway support and rescue breathing are begun as soon as possible. It can be very difficult to feel a pulse in infants or small children and there should be as little delay as possible in providing airway support and rescue breathing.

b. The child in full cardiac arrest has most commonly been suffering some period of oxygen deprivation and/or and circulatory failure and the outcome of resuscitative efforts is usually very poor. Unlike in adults, timely defibrillation will not often change the outcome of pediatric cardiac arrest. Moreover, basic life support units equipped with semiautomatic defibrillators will usually have weight or age limitations on the use of the equipment. Critical interventions in a pediatric cardiac arrest are airway and breathing management and circulatory support. Units responding to a pediatric cardiac arrest ideally should be skilled in advanced airway management and vascular or intraosseous access. Recommendations for instructions for bystander CPR for children are different than for adults. These differences should be conveyed in specific neonatal, infant and child CPR protocols.

3 - Choking (Time/Life-Critical Event)

1. Background:

   a. Upper airway obstruction constitutes a life critical emergency requiring immediate intervention by the EMD.

b. Often the only chance for survival of the patient is for the EMD to assist via telephone choking instructions.

c. Patients with a total upper airway obstruction are not able to breathe, speak or cough.

d. Unless the airway is cleared of the blockage the patient will become unconscious within 1-2 minutes and irreversible brain damage and death will occur in 4-6 minutes.

e. Choking instructions given over the telephone by trained EMDs are one of the most common life-saving interventions undertaken by the EMD.

f. A patient who has gagged or has a partial airway obstruction should not have choking instructions provided. If the patient is able to make any sounds through the airway, the patient should not be agitated. If the patient has a cough that seems to be addressing the problem, don't intervene. If the patient appears to be deteriorating, then something should be done. Signs of a partial obstruction are high-pitched wheezing or whistling sounds.

2. Common Causes:

a. Choking on food and small toys (in children) are the most common causes of upper airway obstructions.

b. Some situations such as asthma, epiglotittis and severe allergic reactions may appear to be choking episodes.

3. Common Symptoms Described by Caller (presentation)

    a. The patient may have grabbed his/her throat to signal a choking episode.

    b. The patient's color is blue or has changed from it's normal color.

    c. The patient may be unconscious.

    d. The patient may be reported to have been eating.

4. Instructions Commonly Provided:

    a. Follow Choking instruction sequence found in EMDPRS to provide telephone instructions to the caller.

    b. Be sure to avoid performing chest compressions by ascertaining status of pulse during the choking treatment instructions.

    c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

    d. Treat for shock:

        1) Keep airway clear.

        2) DO NOT GIVE FOOD OR DRINK.

        3) Let patient assume position of comfort.

        4) Calm and reassure patient.

        5) Keep the patient warm (maintain body temperature).

e. Do not attempt choking interventions on patients who do not have a complete airway obstruction (cannot talk, breathe or speak).

f. Gather or list the patient's medications for the doctor.

g. Keep caller on the phone until help arrives and takes over from the bystanders.

h. Repeat choking sequence until help arrives or until the airway is cleared.

i. Call back if the patient's condition changes before help arrives.

j. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

   a. Choking on foreign bodies is a common pediatric problem and one for which pediatricians frequently give safety advice to parents. Small toy parts, latex balloons, mercury batteries and solid food pieces are common causes.

   b. The child who has recovered from a significant choking episode should be evaluated for the possibility of a foreign body that has been aspirated into the lower airway (gone into the body of the lung).

   c. Foreign bodies in the esophagus of young children can sometimes cause choking and respiratory compromise.

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d. Recommendations for instructions for management of choking are different in infants, children and adults. These differences should be conveyed in specific neonatal, infant and child CPR protocols.

4 - Drowning (possible) (Time/Life-Critical Event)

1. Background:

   a. This protocol is intended to be used in those cases of near-drowning incidents ("drowning" is death due to immersion, whereas "near-drowning" is survival from such an event).

   b. If the patient is in cardiac arrest, the EMD should identify the unconsciousness and not breathing status and proceed directly to instructions for CPR.

   c. In cases of shallow water diving incidents, the presence of a cervical spinal injury must always be assumed as a possibility. Care should be taken to not move the patient unless absolutely necessary.

   d. In cases of near-drowning, the patient is often found in respiratory arrest only and not in cardiac arrest. This means that frequently, if the patient is discovered quickly, the patient needs only ventilatory support. The EMD must carefully check for pulselessness prior to initiating CPR.

   e. Resuscitation efforts should be undertaken with all victims of near-drowning. No one knows how long a

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patient can be under water and be successfully resuscitated. There have been documented saves of victims that have been underwater for over an hour.

f. A theory explains that this phenomenon is related to the mammalian diving reflex. Most aquatic mammals are able to exists for long periods of time underwater on lowered levels of oxygen. It is believed that the younger the patient, the longer they can be submerged due to the holdover vestige of the patient's pre-birth disposition where they lived in an aquatic environment on lowered levels of oxygen. Combined with the cold temperature of the water in many cases, the salvageability of the patient is enhanced.

2. Common Causes:

   a. Bathtub drownings, pools, ponds and canals (particularly with children).

   b. Shallow water diving incidents resulting in spinal cord injury.

3. Common Symptoms Described by Caller (presentation)

   a. Coughing, difficulty breathing, lowered levels of consciousness, vomiting and change in skin color.

   b. With possible spinal cord injury the patient may also be experiencing numbness, tingling and immobility in the extremities.

4. Instructions Commonly Provided:

   a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting.

   b. Allow patient to assume a comfortable position. Do not move the patient if a spinal cord injury is suspected due to the mechanism of injury and in cases of shallow water diving incidents.

   c. If the patient is in the water and breathing, support the patient there until help arrives to remove the patient from the water.

   d. Treat for shock:

      1) Keep airway clear.

      2) DO NOT GIVE FOOD OR DRINK.

      3) Let patient assume position of comfort.

      4) Calm and reassure patient.

      5) Keep the patient warm (maintain body temperature).

   e. Call back if the patient's condition changes before help arrives.

   f. If patient is found to be unconscious and not breathing proceed immediately to CPR treatment sequence and initiate CPR.

g. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

a. Drowning is a major cause of unintentional death in young children. Near-drowning, or submersion injury followed by survival, is one critical pediatric emergencies for which you may receive calls for help. For these calls, field management is vital. The real window of opportunity for medical intervention is in the hands of the bystander, EMD, and EMS responders in the field.

b. The injury in near drowning is global oxygen deficit. The goal of treatment is to reverse that deficit with rapid, effective airway support, rescue breathing and other advanced airway management techniques.

c. Although children are given rescue breathing at lower volumes and pressure than adults, wet lungs are stiffer and harder to move. In giving bystanders pre-arrival instructions, make sure that the chest is moving.

d. Vomiting is common in submersion victims and can complicate the airway support, particularly if it is not anticipated.

e. Children are more likely than adults to continue to lose body heat when wet, even in warm weather. Replacing wet clothes if possible will minimize heat loss.

f. Near-drowning, like most other critical pediatric injuries, is best managed with prevention. Restricting unsupervised access to known water hazards, promoting swimming lessons and teaching bystander CPR are some primary and secondary prevention strategies that EMS systems can advocate.

5 - Electrocution (Time/Life-Critical Event)

1. Background:

   a. All electrocutions should be considered cardiac arrests until proven otherwise.

   b. Often falls are associated with electrocutions. Always consider the possibility of a long fall.

   c. The primary concern should be gathering information regarding the safety of the scene and protecting the bystanders by advising them to beware of electrical risks and protecting the rescuers by relaying information about scene safety.

   d. Electrocutions are often associated with internal burns.

   e. All electrocutions should be considered high level emergencies.

2. Common Causes:

   a. Industrial accidents, electrical and utility workers electrocuted by coming in contact with high voltage wires. These are often associated

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with long falls. Always consider the possibility of other associated trauma as a result of the fall, and take spinal precautions.

b. Construction accidents.

c. Household accidents associated with electrified water.

d. Lightning strikes.

3. Common Symptoms Described by Caller (presentation)

   a. Cardiac arrest.

   b. Burning sensation or surface burns at contact point. Also there may be burns at the point of grounding.

   c. Cardiac related problems.

4. Instructions Commonly Provided:

   a. Advise the caller to not come in contact with the electrical source and to beware of electrified water. The caller may attempt to disconnect the electrical source if safe to do so.

   b. Monitor and maintain patient's airway, especially if patient has a lowered level of consciousness.

   c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

   d. Treat for shock:

      1) Keep airway clear.

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      2) DO NOT GIVE FOOD OR DRINK.

3) Let patient assume position of comfort.

4) Calm and reassure patient.

5) Keep the patient warm (maintain body temperature).

e. Do not move the patient if a fall is involved.

f. Call back if the patient's condition changes before help arrives.

g. Contact with appropriate utility to secure the scene should be made as soon as possible. This includes P.D. and Fire Department for traffic control and scene control of downed wires in the case of traffic accidents.

h. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations: - NONE

6 - Pregnancy/Childbirth (Time/Life-Critical Event Type)

1. Background:

a. Gestation encompasses 3 trimesters or time periods. The first trimester includes months 1, 2 and 3. The second trimester includes months 4, 5, and 6. The third trimester includes months 7, 8, and 9.

b. As the pregnancy progresses the severity of complications increases for both the mother and the child.

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c. Bleeding and other complications that occur during the first 7 months of the pregnancy usually represent a miscarriage situation.

d. Often the chief complaint will not be related to the pregnancy. If there seems to be no relationship with the pregnancy, the appropriate chief complaint protocol should be accessed, even if the caller informs you of the pregnancy.

e. Pregnancy is a condition, not an illness.

f. Pregnancy complications in the first and second trimesters, along with vaginal bleeding situations related to gynecological problems, should be handled symptomatically. Usually this requires treatment for shock.

g. An imminent birth is defined as any prima gravida woman in her third trimester (first child) with labor pains less than two minutes apart. Any multigravida woman (second + third child) having labor pains less than five minutes apart should be considered an imminent birth as well.

h. An imminent birth situation also exists if any part of the baby is showing or the mother complains that the pains are constant and/or she has the urge to push.

2. Common Causes:

a. Gynecological complaints most often reported include unusually heavy menstrual bleeding or untimely vaginal bleeding.

   b. Pregnancy related problems included in the first or second trimester usually relate to vaginal bleeding or abdominal pain.

   c. Imminent births include complaints of labor pains as described above, constant labor pains and/or baby parts showing.

3. Common Symptoms Described by Caller (presentation)

   a. Untimely vaginal bleeding with associated shock symptoms.

   b. Onset of labor, water breaking, etc.

   c. Imminent birth as defined above.

4. Instructions Commonly Provided:

   FOR CHILDBIRTH:

   a. Do not try to prevent the birth by holding the legs together or crossing the legs.

   b. Have mother remove all clothing below the waist.

   c. Get mother on the bed or floor and prop her back up with pillows.

   d. Have mother take deep breaths during the pains and try not to push.

   e. Follow specific childbirth pre-arrival instruction scripts as written in the approved EMDPRS.

FOR PREGNANCY PROBLEMS:

a. The most common complaint related to pregnancy problems is untimely vaginal bleeding and associated abdominal pain. Symptoms of shock may be described by the caller as pallor, dizziness or lowered level of consciousness, chills, diaphoresis (sweating).

b. Treat for shock:

   1) Keep airway clear.

   2) DO NOT GIVE FOOD OR DRINK.

   3) Let patient assume position of comfort.

   4) Calm and reassure patient.

   5) Keep the patient warm (maintain body temperature).

APPLICABLE TO BOTH:

a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.

b. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

c. Treat for shock:

   1) Keep airway clear.

   2) DO NOT GIVE FOOD OR DRINK.

3) Let patient assume position of comfort.

4) Calm and reassure patient.

5) Keep the patient warm (maintain body temperature).

d. Gather or list the patient's medications for the doctor.

e. Call back if the patient's condition changes before help arrives.

f. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

   a. The pregnant child (under 16) is more likely than an older woman to have become pregnant under circumstances of coercion, rape, incest, or under the influence of drugs or alcohol. She may have sought unusual means to terminate the pregnancy. Some states allow for protection of confidentiality to pregnant minors; consult your local regulations in this regard.

7 - Unconscious/Fainting (Time/Life-Critical Event)

1. Background:

   a. Unconsciousness denotes a state of consciousness from which an individual cannot be aroused, even with painful stimulation.

    b. A fainting episode denotes a situation from which an individual has previously fainted and has now awakened.

    c. Single fainting episodes (such as a syncopal episode where the patient faints and then returns to a normal consciousness level) are not considered generally to be high level emergencies, though you should treat all faintings with respect until you are certain there is no immediate danger.

    d. Multiple fainting episodes are considered to be more serious.

    e. The primary function of this protocol is to ensure that the patient has an open airway and that it is maintained until help arrives (airway control).

    f. This protocol should be used when there has been a faint or if the patient is unconscious and the caller does not know why. If the patient is an unconscious diabetic, or seizure patient, the EMD should utilize those protocols specifically.

2. Common Causes:

    a. Stroke, diabetes, cardiac arrest, overdoes, poisonings, intoxication, head injuries, hypoxia, seizures, simple fainting episodes, shock and heart rhythm problems (too slow or fast).

    b. Conceivably anything that effects the brain in a negative way can render the patient unconscious.

3. Common Symptoms Described by Caller (presentation)

    a. Fainting episode or episodes of unconsciousness for unknown reasons.

4. Instructions Commonly Provided:

    a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.

    b. Lay patient on his back and monitor respirations. Turn patient on their side if vomiting occurs.

    c. DO NOT PLACE PILLOW UNDER PATIENT'S HEAD.

    d. Treat for shock:

        1) Keep airway clear.

        2) DO NOT GIVE FOOD OR DRINK.

        3) Let patient assume position of comfort.

        4) Calm and reassure patient.

        5) Keep the patient warm (maintain body temperature).

    e. Gather or list the patient's medications for the doctor.

    f. Call back if the patient's condition changes before help arrives.

g. Lock all pets away because they may interfere with instructions given or attack responding personnel.

5. Special Pediatric Considerations:

a. Fainting or unconsciousness in the pediatric patient can be similar to the adult patient in underlying cause and degree of severity. However, there are several special circumstances to consider. In the infant, ***Apparent Life Threatening Events (ALTE)*** may occur from all the same causes mentioned in the general discussion, as well as from washing of stomach contents up the esophagus (reflux), unsuspected or unreported child abuse, serious bacterial infection and primary apnea (stopping breathing) related to immature respiratory reflexes. Usual reported symptoms will include limpness or stiffening, unresponsiveness, pallor or blue spell, which resolve either spontaneously or with attempts at resuscitation or stimulation. All such infants should be evaluated promptly regardless of how stable they may appear after the event.

b. Infants and toddlers are subject to a particular kind of breath-holding spell that is very alarming to witness but usually self-limited. Typically the toddler will become angry or distressed about something and while crying suddenly hold his or her breath, sometimes to the point of unconsciousness, turning blue and possibly resulting in seizures. The hallmark of these episodes is that they occur while the child is crying and resolve on their own after a matter of seconds. A second variety of breath-holding in toddlers and young children is related to the fainting adults have when witnessing a distressing event. This spell usually occurs when the child turns pale and becomes unresponsive after a sudden but trivial injury. Both varieties may be difficult to distinguish from more concerning problems unless the child has done this in the past.

Summary

This unit has trained you on the medical content and design of the thirty-two chief complaint types. You have learned about the three types of complaints, and have been trained on the use of your local EMDPRS protocol.

Next, you will complete the course by taking part in a final examination. The exam is comprehensive. It covers all material taught in this course. There will be role-play scenarios where you will be evaluated on your ability to use the knowledge you have gained.

MODULE 4
Practical Examination

MODULE OVERVIEW

Module 4 is the final practical exam for the NHTSA EMD training curriculum. You will demonstrate the proper and effective use of the knowledge that you have gained throughout this course.

The practical exam will assist the instructor(s) in determining your readiness for the job of emergency medical dispatcher. As a result, you will likely be asked to demonstrate proficiency in all areas of EMD in a comprehensive format. You should be prepared to deal with all thirty-two chief complaint types. You will be tested, however, on only sixteen "real-life" simulations. These scenarios are conducted between the instructor and you, or you may be asked to participate in acting out a scenario with another trainee as the instructor(s) observe you. The instructor will decide on which types of complaints you will be tested.

MODULE OBJECTIVES

Upon completion of this module, you will:

1. Demonstrate effective and proper EMD behaviors.

EXAM OVERVIEW

The NHTSA course practical examination will consist of simulated or scripted calls for emergency medical assistance. You will be assessed on 16 of the 32 chief complaint types.

You will be assessed on your knowledge and demonstration of the skills required for effective dispatch including:

1. Proper telephone techniques;
2. Proper handling of difficult callers;
3. Proper use of EMDPRS to elicit dispatch information;
4. Proper use of the EMDPRS to allocate resources based on use of information gathered;
5. Proper identification of medical emergencies and
6. Proper delivery of medical instructions from the EMDPRS.

Simulations and scripted role plays will be based on actual 9-1-1 calls. Actual 9-1-1 calls will be used to develop these simulations. Transcriptions might be used when available and cost effective. In either case, caller identification information contained in the calls will be removed and replaced with false data to protect the identity of the callers.

EXAM OBJECTIVES

Final Exam Terminal Objective

Upon completion of this exam, you will be able to:

1. Demonstrate effective and proper EMD behaviors.

GLOSSARY
Common EMD Terminology

GLOSSARY OVERVIEW

This glossary contains terms that you may commonly hear in your work. Many of these terms are contained in this curriculum. Other medical and/or legal terms are included here, providing you with additional exposure to terms common in the industry, from terms that other EMDs may use to those used by ALS personnel and Physicians with which you will come into contact.

GLOSSARY
Common EMD Terminology

GLOSSARY OF TERMS

a-, an-, ano-: Prefix meaning without.

abandonment: A termination of a paramedic-patient relationship by the paramedic without consent of the patient and without care to the patient by qualified medical providers.

ABC's: *A*irway, *B*reathing and *C*irculation; the first three steps in the examination of any victim; basic life support.

abdomen: The large body cavity below the diaphragm and above the pelvis.

abdominal: Pertaining to the abdomen.

abduct: To draw away from the midline.

abduction: The act of abducting; the state of being abducted.

abnormal: Not normal; malformed.

abortion: The premature expulsion of the products of conception from the uterus; miscarriage.

> **incomplete abortion:** The expulsion of part of the fetus, or of other parts of the products of conception, from the uterus before term.
> **missed abortion:** Retention of the contents of the uterus after the fetus dies.
> **spontaneous abortion:** An abortion occurring naturally.
> **therapeutic abortion:** An induced abortion, usually accomplished by qualified medical personnel under ideal conditions; the purpose is usually to preserve the life of the mother.
> **threatened abortion:** The appearance of signs and symptoms of possible loss of the fetus; characterized by bleeding and cramps.

abrade: To wear away by mechanical action; to scrape away a substance.

abrasion: An injury consisting of the loss of a partial thickness of skin from rubbing or scraping on a hard, rough surface; also called a brush burn, friction burn.

GLOSSARY
Common EMD Terminology

abruptio placentae: A premature separation of a normally implanted placenta from the uterine wall usually occurring during the third trimester of pregnancy and accompanied by pain and bleeding.

abscess: A localized collection of pus in any part of the body; formed by disintegration of tissues and accumulation of white blood cells.

absorbent: Having the quality to attract another substance and incorporate it into its substance.

absorption: The act of absorbing; the passage of one material into another's internal structure.

ac: Abbreviation for *ante cibum*, meaning before eating.

access: A way or means of approach; the action of going to or reaching.

acetabulum: The cup-shaped cavity on the external surface of the innominate bone in which the rounded head of the femur fits.

acetic acid: The principal acid in vinegar.

acetone: A chemical compound found normally in small amounts in the urine; diabetic patients are said to produce a "fruity odor" when larger amounts are produced in blood and urine.

acid: Sour; a substance that forms hydrogen ions in solution and from which hydrogen may be displaced by a metal when a salt is formed.

acromioclavicular joint: The point of the shoulder; the junction (union) between clavicle and scapula plus the supporting ligaments.

acromion: The lateral, triangular, bony projection of the scapular spine forming the point of the shoulder with the lateral part of the clavicle.

activated charcoal: Powdered charcoal that has been treated to increase its powers of absorption; used in a slurry to absorb ingested poison.

acute: Having rapid onset, severe symptoms, and a relatively short duration.

acute abdomen: A serious, intra-abdominal condition causing irritation or inflammation of the peritoneum, attended by pain, tenderness, and muscular rigidity (board-like abdomen).

acute myocardial infarction: The acute phase of a heart attack, wherein a spasm or blockage of a coronary artery produces a spectrum of signs and symptoms, commonly including chest pain, nausea, diaphoresis, anxiety, pallor, lassitude.

GLOSSARY
Common EMD Terminology

Adam's apple: The projection on the anterior surface of the neck, formed by the thyroid cartilage of the larynx.

addiction: The state of being strongly dependent upon some agent; drugs, tobacco, for example.

adduct: To move toward the center of the body, particularly a limb or head.

adduction: The act of adducting; the movement of a part toward the midline of the body.

adipose: Fatty tissue.

adjunct: An accessory or auxiliary agent or measure; an oropharyngeal airway is an airway management adjunct.

ad lib: Abbreviation for *ad libitum,* meaning as desired.

adrenal: Refers to the adrenal gland or its secretion.

Adrenalin: The proprietary name for epinephrine.

adrenergic: Activated by, characteristic of, or secreting epinephrine or other substances with similar activities (catecholaminic).

Advanced Life Support (ALS): Basic life support plus invasive techniques leading to definitive therapy to save the patient's life.

aerobe: An organism that lives and grows in the presence of free oxygen.

afebrile: Without fever.

afferent: Bearing or conducting inward.

affinity: Attraction.

afterbirth: The placenta and membranes expelled after the birth of a child.

agglutination: Clumping together of blood cells.

agonal: Pertaining to death or dying.

agonist: A prime mover; a muscle opposed in action by another muscle, called the antogonist.

air: The gaseous mixture which composes the Earth's atmosphere; composed of approximately 21 percent oxygen, 79 percent nitrogen, plus trace gases.

air chisel: A chisel attachment for devices powered by compressed air; used to cut away metal and other materials.

air cutter gun kit: An air powered tool for cutting that does not produce heat or sparks.

air embolism: The presence of air bubbles in the heart or blood vessels causing an obstruction.

GLOSSARY
Common EMD Terminology

air hunger: A term for labored breathing.

air passage: Any of several tubes that normally transmit air into the lungs.

air splint: A double-walled plastic tube that immobilizes a limb when sufficient air is blown into the space between the walls of the tube, to cause it to become almost rigid.

airway: An air passage.
  artificial airway: A device used to assure free passage of air through the nose, mouth, and pharynx into the trachea.
  lower airway: The air passage from the larynx to the pulmonary alveoli.
  upper airway: The air passage from the nose and mouth to the larynx.

albumin: A protein substance found in human tissues as well as in other animals and in plants.

alcohol: A transparent, colorless, volatile fluid produced by fermentation of carbohydrates with yeast.

alcoholic: Pertaining to or containing alcohol; also a person who becomes habituated, dependent, or addicted to alcohol consumption.

alimentary tract: The digestive tube from the mouth to the anus.

alkali: Any compound of electropositive element (usually a metal such as sodium) in combination with an electronegative hydroxyl ion or similar ion.

alkaline: Having a pH greater than 7.0; in human physiology, having a pH greater than 7.35.

alkalinizing agent: A substance used to increase pH or alkalinity; usually used to offset acidosis.

alkalosis: An abnormal state of the body in which the pH rises above 7.45; loss of too much carbon dioxide by hyperventilation (respiratory alkalosis) or too much acid by vomiting or by overdose of alkalizing agents (metabolic alkalosis).

allergen: A substance capable of inducing an allergy or specific hypersensitivity.

allergic reaction: A local or general reaction to an allergen, usually characterized by hives or tissue swelling or dyspnea.

allergy: Hypersensitivity to a substance, causing an abnormal reaction.

alveolar ridge: The bony remains of the jaws from which teeth have been removed.

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GLOSSARY
Common EMD Terminology

alveolus: A cavity; specifically, the socket holding a tooth; or a terminal air sac of the lung.

amaurosis: Loss of sight without apparent lesion of the eye, or from disease.

amaurosis fugax: Sudden transitory partial blindness.

amenorrhea: Absence of the menstrual flow.

AMI: Abbreviation for acute myocardial infarction.

amino acid: An organic acid in which one of the hydrogen atoms has been replaced by a molecular amine group the chief component of protein.

aminophylline: A drug of the theophylline family, helpful in the treatment of asthma, chronic obstructive pulmonary disease, and pulmonary edema.

amniotic fluid: The fluid surrounding the fetus in the uterus, contained in the amniotic sac.

amniotic sac: A thick, transparent sac that holds the fetus suspended in the amniotic fluid.

amobarbital: A drug of the barbiturate class, with hypnotic/sedative action; a controlled substance drug.

amphetamine: A class of drugs that produces potent central nervous system stimulation; an "upper".

ampule: A sealed glass container for medication.

amputation: Complete removal of an appendage.

anaerobic: Life without oxygen.

anaerobic metabolism: Metabolism without air, caused by a lack of gas exchange at the cellular level; product of cardiac arrest mechanism, where no oxygen reaches the cells.

anal canal: The terminal portion of the alimentary canal extending from the rectum to the anus.

analgesic: A pain-relieving drug; a class of drugs used to reduce pain.

analog signal: A continuous signal in varying amplitude and direction in proportion to the signal source, EKG for example.

anaphylaxis: An exaggerated allergic reaction, usually caused by foreign proteins.

anasarca: A severe, generalized edema.

anastomosis: A joining together of blood or lymph vessels by an anatomical, natural arrangement or by accessory channels around a joint, whereby if a chief arterial supply is interrupted, a constant blood flow will be achieved; also a surgical joining of two hollow organs, or of part of the same organ, or between blood vessels.

anatomic position: The presumed body position when referring to anatomical landmarks; upright, facing the observer, with hands and arms at sides, thumbs pointing away from the body, legs and feet pointing straight ahead.

anatomical: Pertaining to anatomy.

anatomy: The structure of the body, or the study of body structure.

anemia: The condition in which the blood is deficient in hemoglobin, red blood cells, or in total volume.

anesthesia: A partial or complete loss of sensation with or without loss of consciousness; can result from drug administration or from injury or disease.

aneurysm: A permanent blood-filled dilation of a blood vessel resulting from disease or injury of the blood vessel wall.

angina pectoris: A spasmodic pain in the chest, characterized by a sensation of severe constriction or pressure on the anterior chest; associated with insufficient blood supply to the heart; aggravated by exercise or tension and relieved by rest or medication.

Angiocath: The trade name for an intravenous cannula with a Teflon catheter over the metallic needle; has become a generic name for such a device.

angiogram: A radiographic depiction of blood vessels through the use of an injected contrast medium.

angioneurotic edema: A condition characterized by a sudden appearance of temporary edematous areas of the skin and mucous membranes, often associated with hives, and may be an allergic reaction involving the larynx, face, and other areas of the body; may be a manifestation of anaphylaxis.

angulation: The formation of an angle; an abnormal angle in an extremity or organ.

anisocoria: A condition in which two ocular pupils are not equal in size.

anomaly: Any marked deviation from the norm.

anorexia: A lack of appetite for food.

GLOSSARY
Common EMD Terminology

anorexia nervosa: A serious nervous condition in which the patient loses his appetite and systematically refuses to take adequate nutrition.

anoxia: Without oxygen; a reduction of oxygen in body tissues below required physiology levels.

antagonism: An opposite or contrary action, such as that between muscles or medications.

antagonist: Opponent; commonly used as description of a drug that directly counteracts another drug; naloxone is an opiate antagonist.

ante-: A prefix meaning before in time or place.

anterior: Situated in front of, or in the forward part of; in anatomy, used in reference to the ventral or belly surface of the body.

anti-: A prefix that shows a negative or reversal of the word root placed after it.

antibiotic: A chemical compound produced by and obtained from certain living cells, especially lower plant cells, which is antagonistic to some other form of life, especially pathogenic or noxious organisms.

antibody: A substance produced in the body in response to an antigen that destroys or inactivates the antigen.

anticoagulant: A class of drugs that prevent clotting of blood.

anticonvulsant: A class of drugs that prevents or terminates convulsions.

antidote: A substance to counteract or combat the effect of poison.

antiemetic: A remedy used to control nausea and vomiting.

antigen: A substance that causes the formation of antibodies.

antihistamine: A substance capable of counteracting the pharmacologic effects of histamine by a mechanism other than the production of exactly opposite effects.

antihypertensive: A class of drugs that is used to lower blood pressure.

antipyretic: A class of drugs that reduces fever.

antiseptic: Any preparation that prevents the growth of bacteria.

antiserum: A serum that contains antibodies against a specific disease-producing organism, such as rabies antiserum.

antivenin: An antiserum containing antibodies against reptile or insect venom.

anus: The outlet of the rectum lying in the fold between the buttocks.

GLOSSARY
Common EMD Terminology

anxiety: A feeling of apprehension, uncertainty, and fear.

aorta: The largest artery in the body, originates at the left ventricle and terminates at the bifurcation of the iliac arteries.

apathy: Lack of emotion or feeling; indifference.

APCO: Associated Public-Safety Communications Officers, Inc.

aphasia: Loss of power of expression or comprehension of speech, writing, or signs, due to injury or disease.

aphonia: Loss of voice.

apnea: Absence of respiration.

aponeurosis: A flat, fibrous sheet of connective tissue that serves to connect a muscle with the part that it moves.

apoplexy: Stroke; cerebrovascular accident, caused by blockage or rupture of an artery.

appendicitis: Inflammation of the vermiform appendix.

appendix: Vermiform appendix, a wormlike diverticulum, or pouch from the cecum.

aqueous humor: Fluid circulating in the anterior and posterior chambers of the eye.

arm: The upper extremity, specifically that segment between the shoulder and elbow.

arrest: Sudden cessation or stoppage.

arrhythmia: Any disturbance in the rhythm of the heart.

arterial blood: Oxygenated blood.

arteriole: A small artery, that at its distal end leads into a capillary.

arteriosclerosis: A generic name for several conditions that cause the walls of the arteries to become thickened, hard, and inelastic.

artery: A blood vessel, consisting of three layers of tissue and smooth muscle, that carries blood away from the heart.

arthritis: Inflammatory disease of the joints.

articulation: Joining of bones, a joint; touching of one part with another.

artifact: That which is artificial, out of place, introduced by human interference.

artificial ventilation: Movement of air into and out of the lungs by artificial means.

asepsis: Freedom from infectious agents.

GLOSSARY
Common EMD Terminology

asphyxia: Suffocation.

aspirate: To inhale foreign material into the lungs; to remove fluid or foreign material from the lungs or elsewhere by mechanical suction.

aspirin: Salicylic acid acetate; a drug known for its analgesic, fever reducing, and antirheumatic properties.

asthma: A condition marked by recurrent attacks of dyspnea with wheezing due to spasmodic constriction of the bronchi, often as a response to allergens, or by mucous plugs in the bronchioles.

ASTM: American Society for Testing and Materials

asymptomatic: Without symptoms.

ataxia: Failure of muscular coordination; often used to describe a staggering gait.

atherosclerosis: A common form of arteriosclerosis caused by fat deposits in arterial walls.

atlas: The first cervical opening.

atrium: A thin-walled chamber of the heart; the right atrium receives venous blood from the venae cavae; the left atrium receives oxygenated blood from the pulmonary veins.

atrophy: A wasting away of specific tissue.

audio: Relating to sound waves in the range that the human ear can hear; the sound component of a transmitted telemetry signal.

auditory nerve: The eighth cranial nerve, mediates hearing and balance.

aura: A premonitory sensation of impending illness, usually used in connection with an epileptic attack.

auricle: The external ear; ear flap; also atrium.

auscultation: The technique of listening for and interpreting sounds that occur within the body, usually done with a stethoscope.

automatic reaction: An action performed without conscious thought.

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automatic nervous system: Part of the nervous system concerned with the regulation of bodily functions not controlled by conscious thought; composed of the sympathetic and parasympathetic systems.

autotransfusion: A transfusion effected by redirecting the patient's own blood from one part of the body to another.

avulsion: An injury that leaves a piece of skin or other tissue either partially or completely torn away from the body.

B

Babinski reflex: A reflex response of movement of the big toe; positive reflex is determined when, on stroking the sole, the toe turns upward; negative is determined by a downward or no movement of the toe.

backbone system: A communications system used to integrate a number of strategically located base stations into a regional communications system; thus, a mobile unit anywhere within the service or of the system can communicate with its control center.

bag of waters: The amniotic sac and its contained amniotic fluid.

bag-valve-mask: A portable artificial ventilation unit consisting of a face mask, one-way valve, and an inflatable bag; producing positive pressure ventilation.

balanced salt solution: A solution of water and salts formulated to match the composition of normal blood; sodium, potassium, and calcium should be in correct proportion as that of blood.

ball-and-socket joint: A joint wherein the distal bone has a rounded head (ball) that fits into the proximal bone's cup-like socket; the hip and shoulder joints, for example.

band: A term applied to a group of radio wave frequencies.

bandage: A material used to hold a dressing in place.

barbiturates: A class of drugs that produce a calming, sedative effect.

basal cell: The early keratocyte; a cell present in the basal layer of the epidermis.

basal skull fracture: A fracture involving the base of the cranium.

base: Alkaline; a compound that dissociates with formation of a hydroxyl ion (OH^-); a solution having a pH greater than 7.0.

base station: A station (transmitter, receiver, and station control) installed at a fixed location and used to communicate with mobile stations.

Basic Life Support (BLS): Maintenance of the ABC's (airway, breathing, and circulation) without adjunctive equipment.

bladder: A membranous sac; commonly referring to the muscular membranous sac that stores urine.

blanch: To become white or pale.

blind panic: A type of panic in which an individual's judgment seems to disappear; seen in situations where there are mass casualties.

blister: A collection of fluid under or within the epidermis.

blood: The fluid that circulates through the heart, arteries, capillaries and veins, carrying nutriment and oxygen to the body cells, removing waste products such as carbon dioxide and various metabolic products for excretion.

blood clot: A soft, coherent, jellylike mass resulting from the conversion of fibrinogen to fibrin, thereby entrapping the red blood cells and other formed elements within the fibrinic web.

Battle's sign: A contusion on the mastoid process of either ear; sign of a basilar skull fracture.

beeper: A term applied to a selectively activated paging receiver usually carried in the pocket or on the belt; upon receiving a page specifically directed to it, the receiver emits a beeping sound.

Benadryl: Trade name for diphenhydramine hydrochloride, an antihistamine.

bends: Pain in the limbs and abdomen occurring as a result of bubbles of nitrogen in the blood; caused by too rapid decompression; caisson disease, decompression sickness.

benign: Not dangerous; noncancerous; nonmalignant.

bevel: The slanting edges of the point of a needle.

Benzadrine: Brand name for amphetamine sulfate, a central nervous system stimulant.

bicarbonate: Any salt having two parts carbonic acid to one of any basic substance; often used as an abbreviated form of sodium bicarbonate; also bicarb.

biceps: The large muscle of the front part of the arm that bends the forearm at the elbow; also, one of the hamstring muscles located on the back of the thigh that flexes and rotates the knee.

bile: A fluid secreted by the liver that is concentrated and stored in the gallbladder and then discharged into the intestine where it aids in digestion of fats.

blood pressure (BP): The pressure exerted by the pulsatile flow of blood against the arterial walls.

blood type: One of the several groups into which human blood is divided according to its antigens.

blood volume: The total amount of blood in the heart and blood vessels; represents 8 to 9 percent of body weight in kilograms.

blood volume expander: The synthetic solution administered intravenously to expand blood volume in the treatment of shock.

bloody show: The mucous and bloody discharge signaling beginning of labor.

boltcutter: A tool used to cut heavy metal.

bone: The hard form of connective tissue that constitutes most of the skeleton in a majority of vertebrates.

bourdon gauge: A calibrated pressure gauge used to record the flow rate of a medical gas from a compressed cylinder.

bowel: See intestine.

brachial artery: The artery of the arm that is the continuation of the axillary artery, that in turn branches at the elbow into the radical and ulnar arteries.

bradycardia: An abnormally slow heart rate, usually any rate less than 60 beats per minute.

brain: A soft, large mass of nerve tissue that is contained within the cranium.

brain contusion: See cerebral contusion.

brain stem: The stemlike portion of the brain that connects the brain with the spinal cord; includes the pons, medulla, and mesencephalon.

breech birth (breech delivery): The delivery during which the presenting part of the fetus is the buttocks or foot instead of the head.

bronchial asthma: The common form of asthma.

bronchiole: Any of the smaller bronchi leading into the alveoli of the lung.

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GLOSSARY
Common EMD Terminology

bronchiolitis: A condition seen in children under 2 years of age characterized by dyspnea and wheezing, a viral infection often confused with asthma.

bronchitis: Inflammation of the bronchi.

bronchoconstriction: A narrowing of the bronchial tubes.

bronchodilator: A widening of the bronchial tubes.

bronchospasm: A severe constriction of the bronchial tree.

bronchus: One of the two main branches of the trachea that lead to the right and left lungs; any of the larger air passages of the lungs.

bruise: An injury that does not break the skin but causes rupture of small underlying blood vessels with resulting tissue discoloration; a contusion.

buccal: Pertaining to the cheek or mouth.

burn: An injury caused by heat, electrical current, and chemicals or extreme acidity or alkalinity.

first degree burn: A burn causing only reddening of the outer layer of skin; sunburn usually is a first degree burn.

second degree burn: A burn extending through the outer layer of skin, causing blisters and edema; A scald is usually a second degree burn.

third degree burn: A burn extending through all layers of skin, at times through muscle or connective tissue, having a white leathery look and is insensitive; grafting is more often necessary with a third degree burn; a flame burn is usually third degree.

burn center: A medical facility especially designed, equipped, and staffed to treat severely burned patients.

buttock: The prominence formed by the gluteal muscles on the posterior of both side of the body.

C

cachexia: A state of severe malnutrition and poor health as a result of disease or lack of nourishment.

caisson disease: See bends.

calcium: A mineral substance necessary for life functioning; plays a vital role in heart contraction, nerve conduction, and muscle contractions; cation with double valence.

calcium chloride: $CaC1_2$; used to restore electrolyte balance; used in severe cardiac dysfunction as a positive inotropic agent.

cancer: A malignant tumor; commonly any form of malignancy, including leukemia.

cannula: A tube, often fitted with a trocar, used to enter a duct or cavity.

capillary: Any one of the small blood vessels that connect arteriole and venule, and through whose walls various substances pass into and out of the interstitial tissues, and thence on to the cells.

capsule: A cylindrical gelatin container enclosing a does of medication, usually in powdered form.

carbohydrate: A compound represented by the sugars, starches, and cellulose; contains carbon, hydrogen, and oxygen.

carbon dioxide: CO_2; a colorless and odorless gas that neither supports combustion nor burns; a waste product of aerobic metabolism; in combination with water (H_2O), forms carbonic acid (H_2CO_3).

carbon monoxide: CO; a colorless, odorless, and dangerous gas formed by the incomplete combustion of carbon; it combines four times as quickly with hemoglobin than oxygen; when in the presence of heme, replaces oxygen and reduces oxygen uptake in the lungs.

cardiac: Pertaining to the heart.

cardiac arrest: The sudden cessation of cardiac function with no pulse, no blood pressure, unresponsiveness.

cardiac compression: A technique of external heart massage to restore the pumping action of the heart.

cardiac standstill: The absence of cardiac contraction or electrical activity.

cardiogenic: Of cardiac origin.

cardiogenic shock: The inability of the heart to pump adequate amounts of blood to perfuse the vital organs.

cardiopulmonary resuscitation (CPR): The application of artificial ventilation and external cardiac compression in patients with cardiac arrest to provide an adequate circulation to support life.

cardiotonic drugs: A class of drugs that improves and strengthens myocardial contraction.

cardiovascular collapse: Failure of the heart and blood vessels; shock.

carpals: The eight small bones of the wrist.

carpopedal spasm: A muscular spasm of the hands and feet.

cartilage: A tough, elastic, connective tissue that covers opposite surfaces of movable joints and also forms parts of the skeleton, such as ear and nose.

cartilaginous: Relating to or consisting of cartilage.

cataract: The partial or complete opacity of the crystalline lens of the eye or its capsule.

catecholamine: A biologically active amine, such as epinephrine, norepinephrine and dopamine, which exerts a strong sympathetic action on the heart and peripheral blood vessels, thereby increasing cardiac output and blood pressure.

catheter: A tube used for withdrawing or infusing fluids into various structures of the body.

catheter embolism: The loss of a catheter fragment in a vein from shearing of an indwelling IV catheter.

caustic: Corrosive, destructive to living tissue.

cavity: A hollow or space, especially a space within the body or one of its organ.

abdominal cavity: The space bounded by the abdominal walls, the diaphragm, and the pelvis; contains most of the organs or digestion.

cerum: The pouchlike portion of the large intestine just inferior to the junction of the ileum and ascending colon; the vermiform appendix is attached on the inferior surface.

cell: A small cavity or compartment.

Celsius scale: See centigrade scale.

centigrade scale: The temperature scale in which the freezing point of water is zero degrees and boiling point at sea level is 100 degrees; Celsius scale.

centimeter: A unit of measurement of the metric system, one one-hundredth of a meter; approximately two-fifths of an inch.

central nervous system: The portion of the nervous system consisting of the brain and spinal cord.

cephalic: Pertaining to the head.

cephalic delivery: A delivery in which the head is the presenting part of the fetus; generally considered to be the normal mode of birth.

cerebellum: That portion of the brain behind and below the cerebrum; coordination is the general function.

cerebral: Pertaining to the brain.

cerebral contusion: A bruise of the brain, causing a characteristic symptomatic response.

cerebral hemorrhage: Bleeding into the cerebrum; one form of stroke or cerebrovascular accident.

cerebrospinal fluid: The fluid contained in the four ventricles of the brain and the subarachnoid space around the brain and spinal cord.

cerbrovascular accident (CVA): The sudden cessation of circulation to a region of the brain, due to thrombus, embolism, or hemorrhage; also, a stroke or apoplexy.

cerebrum: The portion of the brain controlling major functions of the body, including movement, sensation, thinking, and emotions.

cervical: Pertaining to the neck.

cervical collar: A device used to immobilize and support the neck.

cervical spine: The superior seven bones of the vertebral column, located in the neck.

cervix: The lower portion, or neck, of the uterus.

Cesarean section: The delivery of a fetus by means of an incision into the uterus, usually through the abdominal wall.

cheek: The side of the face forming the lateral wall of the mouth.

cheekbone: The quadrilateral bone that forms the prominence of the cheek; the zygomatic or malar bone.

chemotherapy: The treatment of disease by drugs; particularly the treatment of malignancy by drugs.

Cheyne-Stokes respiration: An abnormal breathing pattern characterized by rhythmic increase and decrease in depth of ventilation, with regularly recurring periods of apnea; seen in association with central nervous system dysfunction.

CHF: Abbreviation for congestive heart failure.

chief complaint: The problem for which a patient seeks help, stated in a word or short phase.

chills: A sensation of cold, with convulsive shaking of the body.

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Common EMD Terminology

cholesterol: A fatty substance found in animal tissue, egg yolks, and in various oils and fats; thought to contribute to arteriosclerosis.

cholinergic: Pertaining to the type of chemical activity that is characteristic of acetylcholine.

chordae tendineae: Tendons that attach to the free edges of the leaflets of the mitral and tricuspid valves and to the papillary muscles.

chronic: Of long duration, or recurring over a period of time.

chronic obstructive pulmonary disease (COPD): A term comprising chronic bronchitis, emphysema, and asthma; an illness that causes obstructive problems in the airways.

chronotropic: Affecting the time or rate; applied especially to drugs whose administration affect the contraction rate of the heart.

circulatory: Pertaining to the heart and blood vessels.

circulatory collapse: The failure of the cardiac and peripheral circulation.

circulatory system: The body system consisting of the heart and blood vessels.

circumduction: Circular movement of a limb or eye.

circus movement: As it pertains to heart stimulation, the circus movement of a stimulus causes reentry of formerly depolarized cells that are repolarized enough to accept the stimulus and depolarize again, passing along the stimulus to cells that are, in turn, repolarized and accept the stimulus, and around it goes again, causing rapid stimulation of the heart.

cirrhosis: Chronic progressive fibrosis of the liver, often associated with heavy alcohol ingestion.

clammy: Damp and usually cool.

clavicle: The collarbone; attached to the uppermost part of the sternum at a right angle, and joins the scapular spine to form the point of the shoulder.

clinical: Pertaining to the patient.

clinical death: A term that refers to the lack of signs of life, when there is no pulse and no blood pressure; occurs immediately after the onset of cardiac arrest.

closed fracture: A fracture in which there is no laceration in the overlying skin.

clot: A semisolid mass of fibrin and cells.

clubbing: Proliferation of soft tissue about the terminal phalanges of fingers and toes, without osseous change.

CNS: Abbreviation for central nervous system.

CO_2: Chemical formula for carbon dioxide.

coagulation: The process of changing a liquid into a thickened or solid state; the formation of a clot.

coalesce: To unite, to mix, to fuse.

cocaine: A crystalline alkaloid obtained from *Erythoxylon coca* (coca leaves) used as a topical anesthetic, but now used more often as a central nervous system stimulant; often abused.

coccyx: The lowest part of the backbone; composed of three to five small, fused vertebrae; also called the tailbone.

coffee grounds vomitus: A vomitus having the appearance and consistency of coffee grounds; indicates slow bleeding in the stomach and represents the vomiting of partially digested blood.

coke: Street name for cocaine; also colloquial for Coca-Cola, a popular soda drink, nonalcoholic and nonaddictive.

colic: Acute abdominal pain characterized by intermittent cramps; common in infants and young children; also, pertaining to the colon.

colostomy: The creation of an opening between the colon and the surface of the body to provide bowel drainage.

coma: A state of unconsciousness from which the patient cannot be aroused even by powerful stimulation.

comatose: In a state of coma.

comminuted fracture: A fracture in which the bone ends are broken into many fragments.

common bile duct: The duct formed by the union of the common hepatic ducts and the cystic duct; empties into the duodenum.

communicable disease: A disease that is transmissible from one person to another.

complete heart block: The longer than normal R-R interval occurring after a premature ventricular contraction; caused by the failure of the ventricle to contract after the atrial contraction which occurred during the PVC.

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Common EMD Terminology

compliance: The quality of yielding to pressure or force without disruption, or an expression of the measure of ability to do so; the ability of the lung to distend with air as it is forced into the airways.

compound fracture: An open fracture; a fracture in which there is an open wound of the skin and soft tissues leading down to the location of the fracture.

compress: A folded cloth or pad used for applying pressure to stop hemorrhage or as a wet dressing.

concave: Rounded and somewhat depressed or hollowed out.

concussion: A violent jar or shock; the central nervous system injury results from the impact.

condyle: Rounded projection on a bone, may be covered by cartilage at the joining with another bone.

congenital: Referring to any condition that is present at birth.

congestive heart failure: Excessive fluid in the lungs or tissues caused by the failure of the ventricles to effectively pump blood.

conjunctiva: The delicate membrane that lines the eyelids and covers the exposed surface of the eyeball.

connective tissue: The tissue that binds together and supports the various structures of the body.

conscious: Capable of responding to sensory stimuli and having subjective experiences.

consent: An agreement by patients to accept treatment offered as explained by medical personnel.

> **implied consent:** An assumed consent given by an unconscious adult when emergency lifesaving treatment is required.
>
> **informed consent:** A consent given for treatment by a mentally competent adult who understands what the treatment will involve; can also be given by parent or guardian of a child, as defined by the State, or for a mentally incompetent adult.

constrict: To be made smaller by drawing together or squeezing.

constricting band: A band used to restrict the lymphatic flow of blood back to the heart.

contagious: A term that refers to a disease that is readily transmitted from one person to another.

contagious disease: An infectious disease transmittible by direct or indirect contact; now synonymous with communicable disease.

contaminated: A term used in reference to a wound or other surface that has been infected with bacteria; may also refer to polluted water, food or drugs.

contraction: A shortening of muscle fiber.

contractility: The ability of any muscle fiber to contract when it is depolarized by a stimulus.

contraindication: Not indicated; a situation that prohibits the use of a drug or technique.

contralateral: On the opposite side.

contusion: A bruise; an injury that causes a hemorrhage in or beneath the skin but does not break the skin.

convection: The conveyance of heat in liquid or gaseous form by movement of heated particles (as when the warm air of a room ascends to the ceiling); the loss of body heat to the atmosphere when air passes over the body.

convex: Rounded and somewhat elevated.

convulsion: A violent involuntary contraction or series of contractions of the voluntary muscles; a fit or seizure.

COPD: Abbreviation for chronic obstructive pulmonary disease.

core temperature: A body temperature measured centrally, from within the esophagus or rectum.

corium: The fibrous, inner layer of the skin, the true skin.

cornified: Converted into tough tissue; keratinized; used to describe the outermost layer of skin.

coronary: A term applied to the cardiac blood vessels that supply blood to the walls of the heart.

coronary artery: One of the two arteries arising from the aortic sinus to supply the heart muscle with blood.

coronary artery disease: A progressive narrowing and eventual obstruction of the coronary arteries by the atherosclerotic process.

coronary bypass: The surgical procedure whereby a graft of part of the external saphenous vein is used to pass by a blocked coronary artery.

coronary occlusion: An obstruction in the coronary artery that hinders the flow of blood to some part of the heart; may be caused by narrowing of the vessel by atheromatous plaque or by a clot or by spasm of the vessel itself.

coronary thrombosis: The blockage of a coronary artery by a clot.

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Common EMD Terminology

corticosteroid: A class of drugs, similar to the naturally occurring steroid hormones, sometimes used to counteract inflammation.

costal: Pertaining to the ribs.

costochondral: Pertaining to the rib and its cartilaginous portion attached to the sternum.

costovertebral angle: The angle formed by the spinal column and the 12th ribs; the general anatomic location of the kidneys.

countershock: The application of direct current to the patient in order to counteract some dysrhythmia of the heart.

CPR: Abbreviation for cardiopulmonary resuscitation.

cramp: A painful spasm, usually of a muscle; a gripping pain in the abdominal area; colic.

craniad: Toward the head.

cranial nerves: The 12 pairs of nerves connected directly with the brain.

cranium: Skull.

cravat: A special type of bandage made from a large triangular piece of cloth and folded to form a band; used as a temporary dressing for a fracture or would.

crepitus: A grating sound heard and the sensation felt when the fractured ends of a bone rub together.

crib death: See sudden infant death syndrome.

cricoid cartilage: The thick ring-shaped cartilage inferior to the thyroid cartilage of the larynx.

cricothyroid membrane: The fibrous tissue between the superior thyroid cartilage and the inferior cricoid cartilage.

crisis: A critical turning point or juncture; applied to both medical and psychiatric problems.

croup: A common viral disease of children; characterized by spasm of the larynx and resulting upper airway obstruction.

crowbar: A long metal bar with a chiselike point at one end; used as a lever for prying.

crowning: The stage of birth when the presenting part of the baby is visible at the vaginal orifice.

crystalloid: A substance capable of crystallization that, in solution, may be diffused through animal membranes; does not contain protein molecules.

CSF: Abbreviation for cerebrospinal fluid.

cumulative action: Action of increased intensity evidenced after several portions of the drug are taken.

cutaneous: Pertaining to the skin.

cutdown: Surgical exposure of a vessel to insert a cannula for the purpose of administering fluids or other medications.

CVA: Abbreviation for cerebrovascular accident.

cyanosis: A blueness of the skin due to insufficient oxygen in the blood.

cyclic: Occurring periodically.

cystic: Pertaining to cysts; also to the urinary bladder.

D

Darvon: A trade name for propoxyphene, a narcotic.

decerebrate posture: A posture assumed by a patient with severe brain dysfunction; characterized by extension and internal rotation of the arms and extension of the legs.

decompensation: Failure of the heart to maintain sufficient circulation of the blood.

decompression: Removal of compression or pressure.

decompression chamber: A chamber of compressed air into which a person may be introduced to treat decompression sickness by recompressing the person and gradually lowering the pressure in the chamber to match the local atmosphere; also, hyperbaric chamber.

decompression sickness: Bends; a condition caused by nitrogen bubbles that have returned to a gaseous state becoming lodged in blood or body tissues; characterized by pain in joints and chest, itching of skin, pulmonary edema.

decontaminate: Remove foreign substance that could cause harm; frequently used to describe removal of radioactive material from person, clothing, or area.

decorticate posture: The posture assumed by patients with a lesion at the brainstem level or above; characterized by tightly flexed arms, clenched fists, and slightly extended legs.

decubitus ulcer: A bedsore; ulcer caused by lack of blood supply to an area because of the pressure exerted on it by the part pressing against the bedding.

defecate: To discharge feces from the rectum.

defibrillation: Removal of fibrillation; applying unsynchronized direct current electrical shock to terminate fibrillation.

defibrillator: Any agent or measure that causes fibrillation to cease.

definitive care: Care given that will actually reverse, or act as a medium to reverse, a pathologic condition.

dehydration: Loss of water and electrolytes; excessive loss of body water.

delirium: A mental disturbance characterized by illusions, hallucinations, excitement, physical restlessness, having a short duration.

delirium tremens: DT's a form of insanity, often temporary, caused by alcohol poisoning; characterized by sweating, tremor, great excitement, precordial pain, anxiety, and mental distress; occurs usually following heavy alcohol intake.

delusion: A belief or feeling that has no basis in fact; seen in several types of mental illness.

Demerol: A trade name for meperidine hydrochloride, a synthetic narcotic.

dementia: Progressive mental deterioration due to organic disease of the brain.

depressant: An agent that lowers functional activity, a sedative.

depressed fracture: A skull fracture with impaction, depression, or a sinking in of the fragments.

depression: A mental state characterized by feelings of dejection, psychomotor retardation, insomnia, or weight loss, often of delusional proportion.

derm: Prefix meaning having to do with skin.

dermis: The inner layer of skin; contains the skin appendages, hair follicles, sweat glands, nerves, and blood vessels.

dextran: A water-soluble polysaccharide used as a synthetic plasma volume expander in infusions.

diabetes: A general term referring to disorders characterized by excessive urine excretion, excessive thirst, and excessive hunger.

diabetic coma: Loss of consciousness due to severe diabetes mellitus which has not been treated or to treatment which has not been adequately regulated.

diagnosis: The determination of the nature of a pathological condition.

diagnostic signs: The indications of a patient's physiologic state and the determining factors for treatment.

dialysis: The passage of substances through a membrane; the process of removing undesirable factors from a fluid through a selectively permeable membrane.

diaphoresis: Profuse perspiration.

diaphragm: The flat group of muscles and tendons that separate the abdominal and thoracic cavities.

diaphragm: The flat group of muscles and tendons that separate the abdominal and thoracic cavities.

diarrhea: The passage of frequent watery or loose stools.

diazepam: A tranquilizer and muscle relaxant drug sometimes used for treatment of seizures; trade name Valium.

digestion: The process by which food is converted into simple chemical substances that can be absorbed by the intestines.

digestive tract: The passage of tubes leading from the mouth and pharynx to the anus; the alimentary tract; mouth, pharynx, esophagus, stomach, small intestine, large intestine, rectum, and anus.

digitalis: A drug used in the treatment of heart disease, especially heart failure and some atrial arrhythmias; a cardiac glycoside from *digitalis purpusa,* or purple foxglove, a common herb.

digitalis toxicity: A state caused by an overdose of digitalis marked by anorexia, nausea, vomiting, yellow or green vision, and by increasing AV block, premature contractions, bradycardia.

dilatation: The act of widening an orifice beyond its normal dimensions.

dilated pupil: An ocular pupil enlarged beyond its normal size.

dilation: The process of expanding or enlarging.

Dilaudid: The trade name for dihydromorphinone, a drug with analgesia of the narcotic variety, and a respiratory depressant.

diplopia: Double vision.

direct current electric shock: Electric shock derived from storage batteries, as opposed to electric shock derived from alternating current; preferred method of defibrillation.

disc: The cartilaginous pad between the vertebrae that separates and cushions them.

discharge: Setting free or liberation; release the electrical charge in defibrillation.

disentanglement: The freeing of an entrapped victim.

dislocation: The state of being misaligned; the displacement of the ends of two bones at their joint so that the joint surfaces are no longer in proper contact.

disorganization: A disturbed mental state characterized by the inability to estimate direction or location or to be aware of time or other people.

dispatcher: One who transmits calls to service units and sends vehicles and personnel on assignments.

distal: Farthest from any point on the center or median line; in extremities, farthest from the point of junction of the trunk of the body.

distention: The state of being inflated or enlarged, particularly of the abdomen.

distortion: The state of being twisted out of normal or natural shape or position.

diuresis: Increased secretion of urine.

diuretic: An agent used to increase the secretion of urine by the kidneys.

diverticulitis: Inflammation of a diverticulum of the colon.

DOA: Abbreviation for dead on arrival.

doll's eye reflex: A test for brain damage wherein the eyes move in the same direction as the head is turned from side to side, as if the eyes were painted (doll's) eyes.

dominant pacemaker: That part of the cardiac conduction system that has control of the heart stimulus; normally the sinoatrial node.

dorsal: Toward the back.

dorsalis pedis: The artery whose pulse is palpated on the dorsal part of the foot (the instep).

dorsiflexion: The turning of the foot or toes upward.

DOS: Abbreviation for dead at the scene.

DOT: Department of Transportation.

dressing: A protective covering for a wound; used to stop bleeding and to prevent contamination of the wound.

D.T.'s: See delirium tremens.

dumbcane: A tropical American herb *(Dieffenbachia sequine)* that when chewed causes the tongue to swell, may be severe enough to threaten the airway.

duodenum: The segment of the small intestines that lies just distal to the stomach, said to be about twelve finger breadths in length.

dying heart: A heart with feeble, ineffectual ventricular contractions; evidenced on EKG by greatly widened QRS complexes with electromechanical dissociation; asystole.

dys-: Prefix meaning bad, or difficult.

dysconjugate vision: A condition in which the two eyes are not aligned, but stare in different directions.

dysfunction: Abnormal function of an organ or body part.

dysmenorrhea: Painful or difficult menstruation; menstrual cramps.

dysphagia: An inability to swallow or difficulty in swallowing.

dyspnea: Painful or difficult breathing; usually used to mean rapid, shallow respirations.

dysrhythmia: A disturbance in the cardiac rhythm.

E

eardrum: A flexible membrane that forms most of the outer wall of the tympanic cavity and separates it from the external auditory canal; the tympanum.

ecchymosis: Blood under the skin causing a black and blue mark; bruise.

ECF: Abbreviation for extracellular fluid.

ECG: Abbreviation for electrocardiogram; also EKG.

eclampsia: A toxic condition of pregnancy, causing convulsions and coma, associated with hypertension, edema, and proteinuria.

-ectomy: Suffix meaning surgical removal, as in appendectomy.

ectopic: Out of place; located away from the normal position.

ectopic pregnancy: A pregnancy in which the fetus is implanted elsewhere than in the uterus, e.g., in the fallopian tube or in the abdominal cavity; produces abdominal pain, bleeding.

edema: A condition in which fluid escapes into the body tissues from the vascular or lymphatic spaces and causes local or generalized swelling.

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EEG: Abbreviation for electroencephalograph.

EENT: Abbreviation for eye, ear, nose and throat.

effusion: A leakage of fluid from tissues into a cavity, such as into the pleural cavity.

ejaculation: A sudden act of expulsion; the expulsion of semen.

EKG: Abbreviation for electrocardiogram.

electrocardiogram: A graphic tracing of the electrical currents generated by the process of depolarization and repolarization of the myocardial tissues.

electrocution: Death caused by passage of electrical current through the body.

electroencephalogram: A recording of the electrical potentials on the skull generated by currents emanating spontaneously from nerve cells in the brain.

elixir: A liquid oral medication containing flavorings, sweetening, or alcohol.

emaciation: A wasted condition of the body; extreme leanness.

emboli: Plural of embolus.

embolism: The sudden blocking of an artery or vein by a clot or foreign material which has been brought to the site of lodgement by the blood current.

embolus: A clot or another plug brought by the blood from another vessel and forced into a smaller one, thus obstructing the circulation.

embryo: In animals, the derivatives of the fertilized egg, that eventually becomes offspring, during their period of most rapid development, in man, from about 2 weeks after fertilization to the end of the seventh or eighth week.

emesis: Vomiting.

emetic: An agent that causes vomiting.

emphysema: A chronic lung disease caused by distention of the alveoli and/or destruction of their walls; a pathological accumulation of air in tissues, or organs, as in subcutaneous emphysema.

EMD: Emergency Medical Dispatch; also, Emergency Medical Dispatcher.

EMDPRS: Emergency Medical Dispatch Protocol Reference System; a tool used by Emergency Medical Dispatchers for questioning callers about the nature of a medical emergency, response modes and configurations and provision of medically approved instructions as appropriate.

EMS: Emergency Medical Services.

EMT: Emergency Medical Technician.

EMT-A: Emergency Medical Technician - Ambulance.

EMT-I: Emergency Medical Technician - Intermediate.

EMT-P: Emergency Medical Technician - Paramedic.

emulsion: A preparation of one liquid distributed in small globules throughout the body of a second liquid; used as a lubricant.

encephalitis: Inflammation of the brain.

endocardium: The membrane lining the inside of the heart.

endocrine: Secreting internally.

endoscope: An instrument for the examination of the interior of a hollow organ, such as the stomach or bladder.

endotracheal: Within or through the trachea, an endotracheal tube.

endotracheal intubation: The insertion of a tube through the mouth or nose and into the trachea.

endotracheal tube: One of a series of graduated tubes, with or without inflatable cuffs, to be inserted in the trachea for the purpose of maintaining an airway and/or delivery of oxygen.

enteritis: An inflammation of the small intestine, usually accompanied by diarrhea.

enterocolitis: Inflammation of the small intestine and colon.

envenomation: The poisonous effects caused by the bites, stings, or deposits of insects, spiders, snakes, or other poison-carrying animals.

epi-: Prefix meaning on top of or above.

epicardium: The serous layer of pericardium covering the outside of the heart.

epidemic: An occurrence of a disease among many people over a given area.

epidermis: The outermost and nonvascular layer of the skin.

GLOSSARY
Common EMD Terminology

epidural: Located outside or above the dura, the outermost membrane that covers the brain.

epigastrium: The upper and middle regions of the abdomen within the costal angle.

epiglottis: The lid-like cartilaginous structure overhanging the superior entrance to the larynx and serving to prevent food from entering the larynx and trachea while swallowing.

epiglottitis: A bacterial infection occurring in children, marked by swelling of he epiglottis, high fever, pain on swallowing, and drooling; airway obstruction can result with great rapidity.

epilepsy: A chronic brain disorder marked by paroxysmal attacks of brain dysfunction, usually associated with some alteration of consciousness, abnormal motor behavior, psychic or sensory disturbances; may be preceded by aura.

epinephrine: A hormone released by the adrenal medulla which stimulates the sympathetic nervous system, producing vasoconstriction, increased heart rate and bronchodilation.

erectile tissue: The tissue containing large vascular spaces that fill with blood on stimulation, such as the penis, clitoris, and nipple.

erythema: A redness of the skin produced by congestion of the capillaries.

erythrocyte: A red blood cell.

eschar: A thick, coagulated crust or slough that develops after a thermal burn, cauterization, or laceration of the skin; a scab.

esophageal obturator airway (EOA): A device used to provide an adequate airway by blocking off the esophageal opening with a cuffed obturator and providing ventilation through a series of side holes located at the level of the epiglottis.

esophagus: The portion of the digestive tract that lies between the pharynx and the stomach.

estrogen: One of the classes of female sex hormones.

ethmoid: Bone found at the roof of the nose, the base of the cranium, and between the eyes; through it pass the olfactory nerves.

etiology: The study of the factors that cause disease.

euphoria: A feeling of well-being and happiness.

eustachian tube: The tube leading from the back of the throat to the middle ear; serves to equalize pressure in the middle ear.

evaporation: Conversion of a liquid or solid to a gas.

evert: To turn inside out; to turn outward.

eviscerate: To remove or expose the intestines.

exacerbation: A relapse or worsening of a disease condition.

excoriation: Any superficial loss of substance, such as that produced on the skin by scratching.

excretion: The process whereby the residue of food and waste products of metabolism are eliminated.

exhalation: The act of breathing out; expiration.

exophthalmus: Abnormal protrusion of the eye.

expectorant: A drug that loosens and facilitates the removal of secretions in the bronchial tubes.

exsanguinate: To bleed to death.

extension: The process of straightening; the movement by which the two ends of any joined part are drawn away from each other.

external cardiac compression: The method by which mechanical depression of the lower half of the sternum compresses the ventricles and forces blood into the systemic and pulmonary circulation.

extracellular fluid: The portion of the total body water outside the cells, composed of the interstitial and intravascular fluid.

extract: A concentrated preparation of a drug prepared by dissolving the drug in alcohol or water and evaporating off the excess solvent to a prescribed standard.

extraocular motions: The movement of the eyes.

extrasystole: An extra heartbeat, often a premature contraction.

extremity: A limb, an arm, or a leg.

extrication: Disentanglement; freeing from entrapment.

extruded: Pushed out of normal position.

eyelid: Either of the two movable conjunctival-cutaneous folds that protect the anterior surface of the eyeball.

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GLOSSARY
Common EMD Terminology

facemask: A devise used for the administration of gases, particularly oxygen, or for the redirection of room air, as in the esophageal obturator airway.

facilitation: The technique of encouraging patients to communicate by small positive responses, such as nodding the head or saying "I see."

fainting: A momentary loss of consciousness caused by insufficient blood supply to the brain; syncope.

fallopian tube: The bilateral tubes extending from the ovaries to the uterus.

false motion: A motion of an extremity or a part of the body where ordinarily there should be none, indicative of a fracture or dislocation.

fascia: A sheet or band of fibrous tissue; lies deep under the skin and acts as an anchor for muscle attachment.

fatigue fracture: A fracture in which the bone breaks as a result of repeated stress that cannot be tolerated by that particular bone; most likely involving bones of feet or legs.

fatty acid: Any acid derived from fats by hydrolysis.

FCC: Abbreviation for Federal Communication Commission.

febrile: Pertaining to fever.

feces: The product expelled by the bowels; semisoft waste products of digestion.

Federal Communications Commission: The principal regulatory agency that assists radio frequencies and licenses individuals and communications systems.

femoral: Pertaining to the femur or thigh bone.

femoral artery: The principal artery of the thigh, a continuation of the iliac artery; supplies blood to the lower abdominal wall, the external genitalia, and the lower body extremities; pulse may be palpated in the groin area.

femur: The bone that extends from the pelvis to the knee; the longest and largest bone of the body; the thigh bone.

fetal death certificate: The certificate required when a baby is born dead (stillbirth); most states regard stillbirths of less than 20 weeks pregnancy as abortions and may or may not require registration of a birth.

fetus: The unborn offspring in the postembryonic period after major structures have been outlined; in man from 7 or 8 weeks after fertilization until birth.

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GLOSSARY
Common EMD Terminology

fever: An elevation of body temperature beyond normal.

fibrillation: Asynchronous, uncoordinated contraction of individual muscle fibers, producing no effective contraction.

fibrosis: The formation of fibrous tissue that causes scarring, usually as part of a reparative or reactive process.

fibula: The smaller of the two bones of the lower leg; the most lateral bone of the lower leg.

first responder: A person who arrives first at the scene of a medical emergency, usually police or firefighters.

flaccid: A term meaning soft, limp, without any muscular tone.

flail chest: A condition in which several ribs are broken, each in at least two places; or a sternal fracture or separation of the ribs from the sternum producing a free-floating segment of the chest wall that moves paradoxically on respiration.

flail segment: That segment of the chest wall, in a flail chest injury, lying between the rib fractures and moving paradoxically with respirations.

flatulence: Excessive formation of gases in stomach or intestine.

follicle: A deep, narrow pit in the skin containing the root of the hair; the duct of the sebaceous gland opens into the follicle.

foot-drop: A paralysis of the dorsiflexor muscles of the foot and ankle; the foot falls and the toes drag on the ground when walking.

forearm: The part of the upper extremity between the elbow and the wrist.

foreskin: The free fold of skin that covers the glans penis more or less completely.

Fowler's position: The head of the patient is raised 18 to 20 inches above level, with the knees of the patient raised also.

fracture: A break or rupture in a bone.
- **closed fracture:** A simple fracture, one that does not cause a break in the skin.
- **comminuted fracture:** A fracture in which the bone is shattered, broken into small pieces.
- **compound fracture:** An open fracture, one in which the bone ends pierce the skin.
- **greenstick fracture:** An incomplete fracture, the bone is not broken all the way through, seen most often in children.
- **impacted fracture:** A fracture in which the ends of the bones are jammed together.

oblique fracture: A fracture in which the break crosses the bone in an angle.

open fracture: A compound fracture, one in which the skin is opened.

simple fracture: A closed fracture, one in which the skin is not broken.

spiral fracture: A fracture in which the break line twists around and through the bone.

transverse fracture: A fracture in which the break line extends across the bone at right angle to the long axis.

fracture-dislocation: A fracture of a bone near an articular with a concomitant dislocation at that joint.

fracture of the hip: A fracture that occurs at the upper end of the femur, most often at the neck of the femur.

frequency: The number of waves per unit of time; also the number of occurrences of an illness per unit of time.

frequency modulation: A method of converting an analog signal into a tone of varying pitch that can be transmitted over the radio.

frontal: Pertaining to the forehead region, of the frontal bone; the position of facing straight ahead; the plane that divides the body into front and back parts.

frontal lobe: The portion of the brain under the frontal bone.

frost nip: The superficial local tissue destruction caused by freezing; limited in scope and does not destroy the full thickness of skin.

frostbite: The damage to tissues as a result of prolonged exposure to extreme cold.

fungus: Any vegetable organism of the class to which mushrooms and molds belong, many classes being pathogenic for man.

fuse: To unite or join together.

fused joint: A joining of bones to form a rigid structure, as in the skull or sacrum.

G

gaining access: Establishing a means of reaching the patient who is entangled in some problematic situation.

gait: The manner in which a person walks.

gallbladder: The sac located just beneath the liver that concentrates and stores bile.

gamma rays: An electromagnetic radiation emitted from radioactive substances analogous to x-rays.

ganglion: A knot or mass; a group of nerve cell bodies located outside the central nervous system.

gangrene: Local tissue death as the result of an injury or inadequate blood supply.

gas gangrene: A disease originating in a wound infected with *Clostridium perfringens*; results in rapid tissue destruction.

gastric: Pertaining to the stomach.

gastric juice: The digestive fluids secreted by the stomach; a thin colorless liquid that has an acid reaction; contains mainly hydrocholoric acid, pepsin, and mucus.

gastrointestinal: Pertaining to the stomach and intestine.

gastrointestinal tract: The digestive tract, including stomach, small intestine, large intestine, rectum, and anus.

gauge: A term that refers to the diameter of a needle or a needle cannula.

generic name: The name given to a drug by the company that first manufactures it; usually a simplified version of the chemical name.

genitalia: The external sex organs.

Genito-Urinary system: The system including all the organs involved in reproduction and in the formation and voiding of urine.

geriatric: A term that refers to the elderly.

germicidal: Destructive to germs (microbes).

gestation: The period of development of the young; pregnancy.

gland: An organ or any cell group that produces a secretion not related to its ordinary needs.

glaucoma: A disease that produces increased pressure within the eyeball; can lead to blindness.

glenohumeral joint: The shoulder joint; the joint between the upper end of the humerus and the scapula.

glottis: The vocal apparatus of the larynx, consists of the true vocal cords and the opening between them.

glucose: A simple sugar.

glycogen: The form in which carbohydrates are stored in animal and human tissue.

glycolysis: The breaking down of sugars into simpler compounds.

GLOSSARY
Common EMD Terminology

goiter: Enlargement of the thyroid, causing a swelling in the neck, caused by iodine deficiency in the diet.

gonad: An ovary or testis.

gonorrhea: A contagious inflammation of the genital mucous membrane; the most common venereal disease.

grand mal: A type of epileptic attack; characterized by a short-term, generalized, convulsive seizure.

granuloma: Any one of a large group of distinctive focal lesions that are granulelike or nodular; formed as a result of inflammatory reactions and ordinarily persist in the tissue as slowly smoldering inflammations.

gravid: Pregnant.

groin: The inguinal region; junction of the abdomen and the thigh.

gullet: Esophagus; the passage from the pharynx to the stomach.

gums: The dense fibrous tissue covered by mucous membrane holding the teeth in place; envelopes the alveolar processes of the upper and lower jaws and surrounds the necks of the teeth.

H

habituation: A situation in which a patient produces a tolerance to a drug and becomes psychologically dependent on the drug.

half-ring splint: A traction splint with a hinged half-ring at the upper end that allows the splint to be used on either right or left leg.

hallucination: A sensory perception not founded on objective reality; may involve smell, touch, taste, sight, and hearing.

hallucinogen: A drug or agent that has the capacity to induce hallucinations.

headband: A band used to secure a patient's head to a spineboard.

head-tilt maneuver: A procedure for opening the airway to relive obstruction caused by the tongue; with one hand beneath the patient's neck and one hand on the patient's forehead the neck if lifted and the head is tilted backward as far as possible; not recommended in patients with possible neck injury.

heart: A hollow muscular organ that receives the blood from the veins, sends it through the lungs to be oxygenated, then pumps it to the arteries.

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GLOSSARY
Common EMD Terminology

heart attack: A layman's term for a condition resulting from blockage of a coronary artery and subsequent death of part of the heart muscle; an acute myocardial infarction; a coronary.

heat cramps: A painful muscle cramp resulting from excessive loss of salt and water through sweating.

heat exhaustion: A prostration caused by excessive loss of water and salt through sweating; characterized by clammy skin and a weak, rapid pulse.

hematemesis: A condition in which the patient vomits blood.

hematochezia: The passage of grossly bloody stools or bright red blood from the rectum.

hematoma: A localized collection of blood in an organ, tissue, or space as a result of injury or a broken blood vessel.

hematuria: Blood in the urine.

hemic hypoxia: A condition of insufficient oxygen in the blood that is related to a diminished capacity of the red blood cells to carry oxygen.

hemiparesis: A weakness on one side of the body.

hemiplegia: Paralysis of one side of the body.

hemithorax: Refers to one side of the chest.

hemodialysis: The process of removing certain noxious agents from the blood by diffusion through a semi-permeable membrane.

hemoglobin: The oxygen carrying substance of the red blood cells; when it has absorbed oxygen in the lungs, it is bright red and called oxyhemoglobin; after it has given up its oxygen to the tissues, it is purple in color and is called carboxyhemoglobin.

hemolysis: The disintegration of the red blood cells due to an adverse factor, such as transfusion reaction or snakebite.

hemophilia: An inherited blood disease occurring mostly in males, characterized by the inability of the blood to clot.

hemopneumothorax: The accumulation of air and blood in the pleural cavity.

hemoptysis: Coughing up blood from the lungs.

hemorrhage: Abnormally large amount of bleeding.

hemorrhagic shock: A state of inadequate tissue perfusion due to blood loss.

GLOSSARY
Common EMD Terminology

hemostasis: The stopping or slowing of a hemorrhage; the method of stopping hemorrhage.

hemothorax: Bleeding into the thoracic cavity.

hepatic: Pertaining to the liver.

hepatitis: Inflammation of the liver.

hepatomegaly: A condition of having an enlarged liver.

hernia: The abnormal protrusion of any organ through an opening into another body cavity; most common is the inguinal hernia where a loop of intestine descends into the inguinal canal in the groin.

heroin: An alkaloid prepared from morphine by acetylization; formerly used for relief of coughs; because of the great danger of addiction following use of the drug, its manufacture and importation into the United States is prohibited.

hiatus (or hiatal) hernia: A protusion of the stomach into the mediastinum through an opening in the diaphragm; can cause chest pain similar to angina pectoris or that of acute myocardial infarction.

hinge joint: A specialized joint found in the elbow, knee.

hip: The lateral prominence of the pelvis from the waist to the thigh; more strictly, the hip joint.

hip joint: The ball and socket joint formed by the articulation of the head of the femur and the acetabular fossa.

histamine: A decomposition product of histidine, formed in the intestines and found in most body tissues or produced synthetically; it causes dilation and increased permeability of capillaries and stimulates gastric secretion and visceral muscle contraction.

history: Information about the patient's chief complaint, symptoms, data leading up to the acute episode, previous illnesses, family history, and surgical history.

hives: Red or white raised patches on the skin, often attended by severe itching; a characteristic reaction in allergic responses.

homeostasis: A tendency toward stability in the body's internal environment; a return to normal after any deviation.

homicide: The act of deliberately taking another person's life.

hormone: A substance secreted by an endocrine gland that has effects upon other glands or systems of the body.

host: The organism that a parasite lives in or on.

hostility: A strong dislike, anger, or resistance toward an individual, group, or idea.

hot wire: A wire through which an electric current is passing; a live wire.

humerus: The bone of the upper arm.

humidification: The process of adding water to a gas or to the atmosphere, making the gas or atmosphere moist.

humidifier: A device used with an oxygen supply to moisten the oxygen and to prevent its drying effect on the mucous membranes of the patient.

humor: The extracellular fluids of the body; also, mirth.

hydration: The state of water balance in the body.

hydrothorax: Fluid in the chest cavity.

hygroscopic: Taking up and retaining water readily.

hyper-: Prefix meaning excessive, or increased.

hyperactive: A term meaning excessively or pathologically active.

hypercapnia: Excess of carbon dioxide in the blood.

hyperemia: An increased blood flow to a part of the body.

hyperextend: An overextension of a limb, or other part of the body.

hyperflexia: An overactive reflex.

hyperglycemia: An abnormally increased concentration of sugar in the blood.

hypernatremia: Excess of sodium (Na) in the blood.

hyperpnea: An increased depth of respiration.

hyperpyrexia: An abnormally high fever; hyperthermia.

hyperresonance: An abnormally increased resonance to percussion.

hypersensitivity: A reaction to contact with certain substances; allergy.

hypertension: High blood pressure.

hyperthermia: An abnormally increased body temperature; hyperpyrexia.

GLOSSARY
Common EMD Terminology

hypertonic: A solution having an osmotic pressure greater than a solution to which it is being compared (usually the intracellular fluid, or plasma).

hypertrophy: The morbid enlargement or overgrowth of any organ or part due to an increase in the size of its constituent cells.

hyperventilation: An increased rate and depth of breathing resulting in an abnormal lowering of arterial carbon dioxide, causing alkalosis.

hypervolemia: Abnormally increased volume as of the blood.

hyphema: Hemorrhage within the anterior chamber of the eye.

hypnotic: A medication causing sleep.

hypo-: A prefix meaning less than, lack of, a deficiency.

hypoalimentation: Insufficient nourishment.

hypocapnia: Too little carbon dioxide in the blood.

hypocarbia: An abnormally low carbon dioxide tension in the blood.

hypochondriasis: Anxiety about one's health, with complaint of minor disorders.

hypoglycemia: an abnormally diminished concentration of sugar in the blood; insulin shock.

hypopharynx: The lowest part of the pharynx leading to the larynx and esophagus.

hypopnea: Abnormal decrease in depth and rate of breathing.

hyposensitive: Less sensitive than normal.

hypotension: Low blood pressure.

hypothalamus: The portion of the brainstem that activates, controls, and integrates peripheral autonomic mechanisms, endocrine activity, water balance, and automatic functions, such as sleep.

hypothermia: Decreased body temperature.

hypotonic: A solution having an osmotic pressure less than a solution to which it is being compared (usually the intracellular fluid, or plasma).

hypoventilation: A reduced rate and depth of breathing resulting in a rise in arterial carbon dioxide pressure, acidosis.

hypovolemia: A decreased amount of blood in the body.

hypovolemic shock: Shock caused by a reduction in blood volume, such as caused by hemorrhage.

hypoxemia: A term that refers to inadequate oxygen in the blood.

hypoxia: A low oxygen content in the blood; lack of oxygen in inspired air.

I

ICF: Abbreviation for intracellular fluid.

icterus: Jaundice; the yellow appearance of the skin and other tissues due to the accumulation of bile pigments; seen in liver disease.

idiopathic: Of unknown cause.

idiosyncrasy: Anything that is peculiar to the individual; an unusual reaction to a drug, food, idea, action, or substance that is peculiar to the individual.

immersion feet: A disorder of the feet following prolonged immersion in water; when first removed from the water, the patient's feet are swollen, cold, waxy white with cyanotic areas, and anesthetic; a short time later the parts become red and hot and the swelling increases.

immobilization: To hold a part firmly in place, as with a splint.

immobilize: To make incapable of moving.

immune: Resistant to an infectious disease.

immunization: The process or procedure by which resistance is produced in a living organism; vaccination.

impaled object: An object that has caused a puncture would and remains embedded in the wound.

incision: A would usually made deliberately in connection with surgery; a clean cut as opposed to a laceration.

incompatibility: In blood typing, the situation in which donor and recipient blood cannot be mixed without clumping or other adverse reactions.

incontinence: An inability to prevent the release of urine or feces.

incubation: The time period between exposure to an infection and the appearance of the first symptoms.

incubator: A device that provides protection and temperature control for a newborn infant or a high risk infant of any age.

indication: The circumstances in which a drug or other treatment is of value in the care of a patient.

indirect contact: A means of transmitting a communicable disease through the use of a vector, a third item that acts a mediary.

infarction: The death (necrosis) of a localized area of tissue by cutting off its blood supply.

infect: To contaminate an organism with a disease-inducing substance.

infection: An invasion of a body by disease-producing organisms.

infectious: Capable of being transmitted by infection.

inferior: Anatomically, situated below, or directed downward, or the lower surface or part of a structure.

inferior vena cava: One of the two largest veins in the body that empties venous blood into the right atrium receiving blood from the lower extremities and abdominal organs.

infiltration: Leakage of fluid into the interstitial compartment, usually as a result of improper cannulation of a vein, or by design, to render insensitive the area of surgical procedures, such as suturing.

inflammation: A tissue reaction to disease, irritation, or infection, characterized by pain, heat, redness, and swelling.

infusion: Induction by gravity of a therapeutic fluid other than blood into a vein.

ingestant: That which is taken by mouth, ingested.

ingestion: Intaking of food or other substances through the mouth.

inhalation: The drawing of air or other substances into the lungs.

injection: The forcing of a liquid through a needle or other tube into subcutaneous tissues, the blood vessel, a muscle mass, or an organ.

innervation: Nerve supply to an area; distribution of the nerves.

innocuous: Not harmful.

innominate: Not name; having no name.

insertion: The point at which a muscle is attached to the bone or fascia that it moves.

inspection: A careful visual examination of the patient, for the purpose of identifying any abnormality.

inspiration: Inhalation.

insulation: A nonconducting substance that offers a barrier to the passage of heat or electricity.

insulin: A hormone secreted by the islets of Langerhans in the pancreas; essential for the proper metabolism of blood sugar.

insulin shock: Not a true form of shock; hypoglycemia caused by excessive insulin dosage, characterized by sweating, tremor, anxiety, unusual behavior, vertigo, and diplopia; may cause death of brain cells.

integument: A covering or sheath; the skin.

intercostal: Between the ribs.

intercostal muscles: Muscles between the ribs.

intercostal space (ICS): The space between the ribs; identified by the number of the rib above that space, e.g., the first intercostal space is the space below the first rib, directly above the second rib.

interstitial fluid: The fluid bathing the cells; part of the extracellular fluid; continuous with the lymphatic fluid.

intestine: The portion of the alimentary canal extending from the pylorus to the anus.

- **large intestine:** The portion of the digestive tube extending from the ileocecal valve to the anus; composed of cecum, colon, and rectum; the large bowel.
- **small intestine:** The portion of the digestive tube between the stomach and the cecum; composed of the duodenum, the jejunum, and the ileum; the small bowel.

intoxicate: To poison; commonly, to cause diminished mental control by means of drugs, alcohol.

intracardiac injection: An injection of medication directly into the heart chamber through the thoracic and ventricular walls.

intracellular fluid: The portion of total body water contained within the cells.

intracerebral: Within the cerebrum.

intracerebral hematoma: An extravasation of blood within the brain.

intracranial: Within the skull.

intramuscular: Within the muscle.

intravascular fluid: The portion of the total body water contained within the blood vessels.

intravenous: Within or into a vein.

intravenous fluid: Sterile water containing additives such as electrolytes and/or sugar in various combinations and concentrations for the purpose of administering to patients per venous infusion.

intrinsic: Of internal organs; innate.

intubation: An insertion of a tube into an organ that is connected to the outside of the body by means of a hollow tube; commonly, the insertion of a tube into the trachea or esophagus.

inversion: A turning inward, inside out, or upside down or other reversal of the normal reaction of a part.

involuntary action: An act performed independent of the will; not voluntary.

involuntary commitment: The commitment of a patient to a hospital for treatment or observation against the patient's will.

involuntary muscle: The muscles that act without voluntary control; smooth muscle.

ipecac syrup: A medication used to induce vomiting.

iris: The colored portion of the eye that surrounds the pupil.

irritation: The act of stimulating; undue sensitivity; slight or temporary disruption of tissues.

islets of Langerhans: The cluster of cells in the pancreas that produce insulin.

isotonic: A drug of the nitrate family isosorbide dinitrate) that acts as a vasodilator; used for angina pectoris; trade name: Isordil.

-itis: A suffix meaning inflammation.

IV: Abbreviation for intravenous.

J

jaundice: The presence of excessive bile pigments in the blood stream that give the skin, mucous membranes, and eyes a distinct yellow color.

jaw thrust maneuver: A procedure for opening the airway, wherein the jaw is lifted and pulled forward to keep the tongue from falling back into the airway.

jejunum: The second portion of the small intestine, between the duodenum and ileum.

joint: The point at which two or more bones articulate; commonly, portion of marijuana.

joint capsule: A fibrous sac that, with is synovial lining, encloses a joint.

jugular: Pertaining to the neck; large vein on either side of the neck, draining the head via its portion named external jugular, or draining the brain via the internal jugular.

jump kit: A closed container fitted with necessary portable equipment and supplies to be used in the emergency care of patients who are treated away from ambulance.

juxta-: Prefix meaning near; close to; as in juxtaposition.

K

keep open rate: A very slow rate of IV infusion designed to keep the route open and not permit the line to clot; a rate of 25 milliliters per hour (American Heart Association).

keratin: The horny proteinlike substance in the upper layers of the skin that is also the principal constituent of the hair and nails.

ketoacidosis: A condition arising in diabetics where their insulin dose is insufficient to their needs; fat is metabolized, instead of sugar, to ketones; characterized by excessive thirst, urination, vomiting, and hyperventilation of the Kussmaul type.

ketone: A compound that is organic and derived by oxidation from a secondary alcohol; produced by metabolism without sugar.

kidneys: The paired organs located in the retroperitoneal cavities that filter blood and produce urine; also act as adjuncts to keep a proper acid-base balance.

Kimmelstiel-Wilson syndrome: kidney failure.

Kussmaul's respiration: A deep, rapid respiration characteristic of hyperglycemia, or diabetic coma, caused by acidosis and the necessity of the body to blow off carbon dioxide as a compensatory mechanism.

L

labia: The lips; the folds of skin and mucous membranes that comprise the vulva.

labor: The muscular contractions of the uterus designed to expel the fetus from the mother.

lacerate: To tear or cut roughly.

laceration: A wound made by tearing or cutting of body tissues.

lactation: The period when the baby is nourished at the breast; the secretion of milk.

lactic acid: An organic acid normally present in tissue and produced in carbohydrate matter by bacterial fermentation; one of the acids produced by anaerobic metabolism, contributing to the acidosis produced in cardiac arrest.

GLOSSARY
Common EMD Terminology

lactic acidosis: An excessive amount of lactic acid in the blood causing a low blood pH.

ladder splint: A flexible splint consisting of two stout parallel wires and finer crosswires; resembles a ladder.

landline: A telephone line.

laparotomy: Incision in the abdominal wall; usually for the purpose of inspection of viscera for abnormalities.

laryngectomee: A person who has undergone a total or partial surgical removal of the larynx.

laryngectomy: The surgical removal of the larynx.

laryngoscope: An instrument used for directly visualizing the larynx and its related structures.

laryngospasm: A severe constriction of the vocal cords, often in response to allergy or noxious stimuli.

laryngotracheobronchitis: Croup; inflammation of the larynx, trachea, and bronchi.

larynx: The organ of voice production.

lateral: Of or toward the side; away from the midline of the body.

left heart failure: Failure of the left ventricle to effectively pump blood into the lungs as well as causing poop perfusion of brain, kidneys, and other parts of the body; pump failure; cardiogenic shock may be the outcome.

leg: The lower limb generally, specifically, that part of the lower limb extending from the knee to the ankle.

lens: The portion of the eye that focuses light rays onto the retina.

lesion: A distinct area of pathologically altered tissue; an injury or wound.

lethal: Fatal.

lethargy: A lack of activity; drowsiness; indifference.

leukemia: A disease of the blood-forming organs, characterized by proliferation of white blood cells and pathological changes in the bone marrow and other lymphoid tissue; cancer of the blood.

leukocyte: White blood cells.

lidocaine: A drug used to prevent or terminate life-threatening ventricular dysrhythmias by suppressing ventricular ectopic activity; trade name: Xylocaine.

life-threatening arrhythmia: Any arrhythmia that causes compromise of the cardiac output, usually ventricular in origin but may be of atrial origin especially if the rate is either extremely slow or extremely rapid (less than 40 or more than 160 per minute.)

ligament: A tough band of fibrous tissue that connects bone to bone or that supports any organ.

limb presentation: A delivery in which the presenting part of a fetus is an arm or a leg.

linear fracture: A fracture running parallel to the long axis of the bone.

linear skull fracture: A skull fracture that runs in a straight line.

lineman's glove: A rubber-lined leather glove, especially designed not to conduct electricity.

liniment: A liquid drug for external use applied by using gentle friction; usually irritating to the tissue and by increasing blood flow in the area, reduces pain and stiffness.

lipid: Fat; any one of a group of fats that is insoluble in water but soluble in fat solvents.

listless: A condition characterized by a lack of inclination toward exertion.

litter: Stretcher.

liver: The large organ in the right upper quadrant of the abdomen that secretes bile, produces many essential proteins, detoxifies many substances, and stores glycogen.

log roll: A method for placing a patient on a carrying device, usually a long spineboard or a flat litter; the patient is rolled on his side, then back on the litter.

lotion: Any liquid medicinal preparation intended for local application.

LSD: Lysergic acid diethylamide; a serotonic antagonist that induces schizophrenic-like states in humans, with hallucinations that are visual rather than auditory; may produce psychosis; used in the treatment of chronic alcoholism and psychotic disorders.

lumbar: Refers to the five vertebrae between the superiorly placed thoracic and inferiorly oriented sacral vertebrae.

lungs: The paired organs in the thorax that effect ventilation and oxygenation.

lye: A solution of alkaline salts obtained by the leaching of wood ashes.

lymph node: Any one of the round, oval, or bean-shaped bodies located along the course of the lymphatic vessels; producing lymphocytes and acting as filters for lymphatic system; when there is infection present, the lymph nodes in the area swell and are detected more easily in the neck and groin.

lymphoid tissues: A three-dimensional network of tissue found in the lymph nodes, spleen, thymus, adenoids, and tonsils that intercept and destroy pathogenic substances.

M

malaise: A general feeling of vague bodily discomfort.

malignant: Cancerous; tending to become progressively worse and resulting in death.

malingering: Willful, deliberate, and fraudulent feigning or exaggeration of the symptoms of illness or injury to attain a consciously desired end.

malleolus: The large, rounded bony protuberance on either side of the ankle joint.

malnutrition: Any disorder of nutrition; usually taken to mean too little nourishment.

mandible: The lower jawbone.

mania: Disordered mental state of extreme excitement.

manic-depressive: Marked by alternating periods of elation and depression.

manubrium: The upper portion of the sternum to which the clavicles and first two pairs of ribs are attached.

marrow cavity: The central cavity in the shaft of the long bone where yellow marrow is contained.

mastoid: A portion of the temporal bone that lies behind the ear, contains spongy bone tissue.

maxilla: The bone of the face that contains the alveoli of the upper teeth.

maxillary artery: The artery on both sides of the face that supplies blood to the face; palpable in front of the ear.

medulla oblongata: The portion of the brain between the cerebellum and spinal cord that contains the centers for control of respiration, heart beat, and other major control centers.

melanin: The pigment that gives skin its color.

melena: The passage of dark stools stained with blood pigment and digested blood; characteristically the stools are black and of a sticky, tarry consistency.

membrane: A thin sheet or layer of pliable tissue that serves as a covering or envelope of a part, or the lining of a cavity.

meninges: The three membranes covering the spinal cord and brain; the dura mater (external), arachnoid (middle), and pia mater (internal).

meningitis: An inflammation of the meninges; characterized by a stiff neck, fever, and delirium.

menopause: The point that marks the permanent cessation of menstrual activity.

menorrhagia: An excessive flow during a menstrual period.

menses: The normal periodic discharge of blood fluid from the uterus; menstruation.

menstrual flow: The regular discharge during menses consisting of blood and the shed endometrium (mucous membrane lining of the uterus).

menstrual period: The time period of the menstrual flow; usually from 3 to 7 days.

mescaline: The most active alkaloid present in the mescal cactus; produces effects similar to those produced by LSD, such as an alteration in mood, changes in perception, visual hallucinations, and an increase in body temperature and blood pressure.

mesentery: The tissues by which the intestines are connected to the back surfaces of the abdominal cavity.

metabolism: The conversion of food into energy and waste products.

metacarpal bones: The five cylindrical bones of the hand extending from the wrist to the fingers.

metatarsal bones: The five cylindrical bones of the foot extending from the ankles to the toes.

methanol: Methyl alcohol; wood alcohol; poisonous if ingested, causing extreme metabolic acidosis.

midclavicular line: An imaginary line beginning in the middle of the clavicle and running parallel to the sternum, passing medially to the male nipple line.

Mickey: Short for Mickey Finn; a knockout drug.

middle ear: The tympanic cavity and its ossicles.

Military Assistance to Traffic and Safety: A program using military helicopters and medical corpsmen as supplements to an existing local emergency medical service system to provide emergency assistance to civilian patients.

mineral acid: A strong acid, such as sulfuric, nitric, or hydrocholoric.

minute volume: The volume of air inhaled and exhaled during 1 minute;

calculated by multiplying tidal volume by respiratory rate.

miosis: An abnormal contraction of a pupil.

miscarriage: A lay term for the abortion or the premature expulsion of a nonliving fetus from the uterus.

mitral valve: A valve located between the left atrium and left ventricle.

mobile intensive care unit (MICU): A vehicle designed to provide specialized emergency care for serious conditions (such as cardiac damage or severe trauma).

molestation: A meddling or interference, often of a sexual nature.

monitor: To watch or listen to some transmission; the instrument which enables a person to watch or listen, such as a cardiac monitor.

morbidity: A synonym for illness; generally used to refer to an untoward effect of an illness or injury.

morphine: A narcotic analgesic used to relieve pain and anxiety; helpful in pulmonary edema because of its peripheral dilating effects.

mortality: Refers to death from a given disease or injury; generally thought of as a statistic to state the ratio of death to recovery.

motion sickness: A sensation induced by repetitive motion, characterized by nausea and lightheadedness.

motor nerves: The nerves that transport messages from the brain to various organs and muscles to stimulate involuntary and voluntary actions.

motor nerves: The nerves that transport messages from the brain to various organs and muscles to stimulate involuntary and voluntary actions.

mottled: Characterized by a patchy, discolored appearance.

mouth gag: A device for protecting the patient's tongue during a convulsion, or for controlling the tongue during insertion of an artificial airway.

mouth-to-mouth ventilation: The preferred emergency method of artificial ventilation when adjuncts are not available.

mouth-to-nose ventilation: An emergency method of artificial ventilation when mouth-to-mouth cannot be used.

mucus: A viscid, slippery secretion that lubricates and protects various body structures.

multipara: A woman who has previously given birth.

murmur: A sound that may be detected in the heart when one of the valves is leaking or partially closed off.

muscle: A tissue composed of elongated cells that have the ability to contract when stimulated, thus causing bone and joints to move, or other anatomical structures to be drawn together.

muscle avulsion fracture: A tearing away of a part of bone, usually by a tendon, ligament, or capsule.

musculature: The muscular system of the body, or a part of the system.

musculoskeletal system: All the collective bones, joints, muscles, and tendons of the body.

myalgia: A tenderness or pain in the muscles.

myocardial: Pertaining to the musculature of the heart.

myocardial contusion: A bruise of the muscular tissue of the heart.

myocardial infarction: The damaging or death of an area of heart muscle resulting from a lack of blood supplying the area.

myocardial rupture: The breaking apart of a damaged portion of the myocardium, usually several days after the onset of acute myocardial infarction; causes bleeding into the pericardial space, cardiac tamponade, and death if untreated.

myocardium: The cardiac muscle.

N

NAEMSP: National Association of Emergency Medical Service Physicians

nail bed: The area of the corium on which the nail rests.

narcosis: An unconscious state produced by narcotics or accumulation of carbon dioxide in the blood, often accompanied by depression of the respiratory system and apnea.

narcotic: A drug used to depress the central nervous system, thereby relieving pain and producing sleep.

nasal bone: Either of the two small oblong bones that together form the bridge of the nose.

nasal cannula: A small tubular prong that fits into the patient's nostril to provide supplemental oxygen; usually there are two,one for each nostril.

nasopharynx: The upper part of the pharynx above the level of the palate.

nausea: An unpleasant sensation, vaguely referred to the epigastrium and abdomen, often culminating in vomiting.

neck: The supporting structure of the head, formed by the seven cervical vertebrae, and lying between the head and shoulders.

necrosis: A death of an area of tissue, usually caused by the cessation of blood supply.

necrotic: Pertaining to dead tissue.

neonate: Newborn, up to age of 1 month.

nerve: A cordlike structure composed of a collection of fibers that convey impulses between a part of the central nervous system and some other region.

nerve root: One of two bundles of nerve fibers emerging from the spinal cord at each vertebra to join and form a spinal nerve.

nervous system: The brain, spinal cord, and nerve branches from the central, peripheral, and autonomic systems.

neural: Relating to any part of the nervous system.

neurogenic: Of or originating in the nervous system.

neurogenic shock: A shock caused by massive vasodilation and pooling of blood in the peripheral vessels to a degree that adequate perfusion cannot be maintained.

neurological: Of or relating to the branch of medical science dealing with the nervous system and its disorders.

neurotic: A term that refers to a person suffering disorders in thought processes that are not due to demonstrable disease of the central nervous system.

neurotoxic: Poisonous to nervous tissue.

neutralize: To render neutral; specifically, the chemical combinations of hydrogen and hydroxyl ions to form water, rendering each ion harmless.

NHTSA: National Highway Transportation Safety Administration

nitrogen narcosis: A drugged condition created when the nitrogen in the body is exposed to great pressure, as in a deep dive; similar to alcoholic intoxication; the condition can cause divers to remove their breathing equipment while underwater; also called "rapture of the deep".

nitroglycerin: A drug used in the treatment of angina pectoris, usually taken under the tongue.

nocturia: The necessity to get up at night to urinate.

nondirecting question: An interview technique in which the paramedic asks open-ended questions in an attempt to calm the patient and gather information on the patient's problem.

norepinephrine: A hormone and drug used in the treatment of shock primarily for its alpha stimulating properties; causes vasoconstriction; trade name Levophed.

noxious: injurious.

nystagmus: Continuous rolling movement of the eyeball.

O

obese: Fat.

oblique fracture: A fracture that runs diagonally to the long axis of the bone.

obstruction: Blockage.

occipital: Pertaining to the back of the head.

occlude: To close off or stop up; obstruct.

occlusion: The act of closure or closing off; an obstruction.

occlusive dressing: A watertight dressing for a wound.

ocular: Pertaining to the eye.

ointment: A semisolid preparation for external application to the body usually containing a medicinal substance.

OJT: On-the-job training.

olfactory nerve: Cranial nerve number one; the nerve that transmits smell impulses to the brain; passes through the cribriform plate of the ethmoid bone.

open fracture or dislocation: A fracture or dislocation exposed to the exterior; an open wound lies over the fracture or dislocation.

open pneumothorax: A pneumothorax caused by an opening in the chest wall; a sucking chest wound.

open wound: A wound in which the affected tissues are exposed by an external opening.

opiate: Technically, one of several alkaloids derived from the opium poppy plant.

optic nerve: Cranial nerve number two; the nerve that transmits visual impulses from the eye to the brain.

oral: Pertaining to the mouth.

orbits: The bony, pyramid-shaped cavities in the skull that hold the eyeballs.

orifice: The entrance to, or outlet of any body cavity.

oropharyngeal airway: The respiratory adjunct placed in the patient's upper airway so that the distal part lies behind the base of the tongue and holds the tongue forward, preventing occlusion of the airway.

oropharynx: The area behind the base of the tongue that lies between the soft palate and upper portion of the epiglottis.

orthopnea: A severe shortness of breathing or difficulty in breathing when lying down; relieved by placing the patient in a sitting position.

-otomy: A suffix meaning surgical incision into an organ, as in tracheotomy.

ovary: The female gonad in which eggs and female hormones are produced.

overhydration: A condition that results from excessive retention of fluids; circulatory overload.

overreaction: Overly intense reaction or response to a stimulus.

ovum: Egg.

oxygen: A colorless, odorless, tasteless gas essential to life and comprising 21 percent of the atmosphere; chemical formula: O_2.

oxygen drive: The stimulus to breathe when the arterial level of oxygen in the blood is low.

oxygen mask: A device that fits over a patient's nose and mouth to permit breathing of oxygen which is fed into it.

oxygen toxicity: An unusual condition caused by excessive concentration of oxygen in inspired air, resulting in damage to lung tissue: IT IS VERY SELDOM SEEN IN EMERGENCY WORK.

P

pacemaker: The specialized tissue within the heart that initiates stimuli; also an artificial device used to stimulate the heart to beat when the electrical conduction system of the heart is malfunctioning.

pager: A pocket-sized radio receiver that provides one-way communication; used to locate or inform individuals within a limited area.

palate: The roof of the mouth.

pallor: A paleness of the skin.

palpate: To examine by feeling and pressing with the palms and the fingers.

palpitation: A sensation felt under the left breast when the heart "skips a beat" caused by premature ventricular contractions.

palsy: A paralysis.

pancreas: An intra-abdominal gland that secretes insulin and important digestive juices.

pancreatitis: An inflammation of the pancreas.

papule: A small, circumscribed, solid elevation of the skin.

paradoxical movement: The motion of an injured section of a flail chest; opposite to the normal movement of the chest wall.

paralysis: Loss or impairment of motor function of a part due to a lesion of the neural or muscular mechanism.

paranoia: A mental disorder characterized by abnormal suspicions or other delusions, often of persecution or grandeur.

paraplegia: The loss of both sensation and motion in the legs and lower parts of the body; most commonly due to damage of the spinal cord.

parasite: An animal or vegetable organism that lives on or in another organism.

parasympathetic nervous system: A subdivision of the autonomic nervous system involved in control of the involuntary functions; restores the body to normality after stimulus.

paresis: Incomplete or partial paralysis.

paresthesia: An abnormal skin sensation, often of the pins-and-

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needles variety, indicating a disturbance in nerve function.

parietal area: Pertaining to or forming any wall of a cavity.

parietal lobe: The upper control lobe of the cerebrum; pertaining to or located near the parietal bone of the skull.

parietal pleura: A serous membrane that lines the inside of the chest wall and the pericardium.

paroxysm: A spasm; a sudden, intense periodic attack, or recurrence of symptoms.

parturition: The act of giving birth.

patch: A connection of a telephone line or circuit that serves several parties or locations.

patella: A small, flat bone that protects the knee joint; the kneecap.

pathogenic: Capable of causing a disease process.

pathognomonic: A sign or symptoms that is sufficiently characteristic of a disease process as to make possible a diagnosis on the basis of that finding alone.

pathologic: Indicative of or caused by disease.

pathological fracture: A fracture in which a specific weakness or destruction of the bone, caused by a certain process, such as cancer, is the reason for the break.

pediatrics: The medical specialty devoted to the diagnosis and treatment of diseases of children.

pelvic cavity: The lowermost portion of the abdominal cavity containing the rectum, urinary bladder, and, in the female, the internal sex organs.

pelvic girdle: The large, bony structure supporting the abdominal and pelvic organs; made up of two ossa innominata.

pelvis: See pelvic girdle.

penetrate: To pierce; the pass into the deeper tissues or into a cavity.

penis: The male organ of urinary discharge and copulation.

peptic ulcer: An ulcer produced by the action of acid, pepsin, gastric juice in the stomach, lower esophagus, and proximal duodenum.

percussion: The act of tapping a part of the body; used as an aid in diagnosing the condition of underlying body structures by the sound obtained by tapping with the fingers.

percutaneous: Through the skin.

perfusion: The act of pouring through or into; the blood getting to the cells in order to exchange gases, nutrients, etc., with the cells.

pericardial cavity: The space or sac formed by the two layers of the pericardium, the outer parietal pericardium, and the inner visceral pericardium.

pericardium: The double-layered sac holding the heart and the origins of the superior vena cava and pulmonary artery.

perineum: The region between the genitals and the anus.

peripheral: Pertaining to the outside; that which is situated away from the center part.

peripheral nervous system: The portion of the nervous system consisting of the nerves and ganglia outside the brain and the spinal column.

peripheral vasoconstriction: The constriction of blood vessels causing a increase in blood pressure.

peripheral vasodilation: The dilation of blood vessels causing a decrease in blood pressure.

peritoneal cavity: The abdominal cavity.

peritoneum: The serous membrane lining the abdominal cavity.

petechia: A minute red spot due to escape of a small amount of blood within the skin.

petit mal seizure: A type of epileptic attack, characterized by a momentary loss of awareness but not accompanied by loss of motor tone.

-phagia: Suffix meaning to swallow, to eat, to ingest.

phalanx: Any bone of the finger or toe.

pharynx: The portion of the airway between the nasal cavity and the larynx.

phenobarbital: One of the barbiturates; a hypnotic-sedative.

phlebitis: An inflammation of the wall of a vein manifested by tenderness, redness, and a slight edema along part of the length of the vein.

phobia: An abnormal and persistent fear of a specific object or situation.

-phonia: Suffix or prefix having to do with speech or sounds.

GLOSSARY
Common EMD Terminology

physical dependence: Habituation or use of a drug, or other maneuver, because of its physiologic support, and because of the undesirable effects of withdrawal.

pigment: A coloring matter of dyestuff.

pituitary gland: The master gland of the body, located in the brain behind the eyes; influences the secretion of all other glands.

placenta: A vascular organ attached to the uterine wall that supplies oxygen and nutrients to the fetus; also called the afterbirth.

plantar: Refers to the sole of the foot.

plasma: The fluid portion of the blood, retains the clotting factors, but has no red or white cells.

platelet: A small cellular element in the blood that assists in blood clotting.

pleura: A continuous serous membrane that lines the outer surfaces of the lungs and the internal surface of the thoracic cavity.

pleuritic pain: A sharp chest pain that is made worse by deep breathing, coughing, or laughing; characteristic of pleuritis.

pleuritis: Inflammation of the pleura.

-pnea: Suffix for respiration, breathing.

pneumo-: Prefix for air or gas; lung.

pneumonia: An acute infectious disease of the lungs; causes an effusion.

pneumothorax: An accumulation of air in the pleural cavity, usually entering after a wound or injury that causes a penetration of the chest wall or laceration of the lung.

poly-: Prefix meaning many or much.

polydipsia: A condition of excessive thirst.

polyphagia: A condition of excessive hunger.

polyuria: A condition of excessive urination.

posterior: Situated in the back of or behind a surface.

post ictal: Refers to the period after the convulsive stage of a seizure.

postmortem: After death; commonly, the detailed examination of a body after death, to determine the cause of death.

postpartum: After childbirth.

preinfarction angina: An unstable angina.

prenatal: Before birth.

presenting part: The part of the baby that emerges first during delivery.

pressure dressing: A dressing with which enough pressure is applied over a wound site to stop bleeding.

pressure splints: An inflatable plastic circumferential splint that can be applied to an extremity and inflated to achieve stability after a fracture.

primipara: A woman who is about to give birth to a baby for the first time.

prognosis: A probable outcome of a disease based on assumptive knowledge.

prolapse: To fall out or slip down; usually refers to an organ or other body part.

prolapsed cord: A delivery in which the umbilical cord appears at the vaginal opening before the head of the infant.

pronation: The act of assuming the prone position; placing or lying face downward; turning the hand palm down.

prone: A position of lying face down.

prophylaxis: A method for taking measure to prevent the occurrence of a given disease or abnormal state.

prostate: A gland at the base of the male bladder that often becomes enlarged later in life and causes an obstruction of urine flow.

prosthesis: An artificial part made to replace a natural one.

prostration: A collapse.

psychogenic shock: A fainting spell as a result of transient generalized cerebral ischemia; not a true shock condition.

psychological dependence: Dependence of a drug, or other therapeutic maneuvers, because of its support to the patient's psyche, rather than to his physiologic function.

psychosis: A mental disorder characterized by a disintegration of personality and loss of contact with reality.

psychosomatic: An indication of an illness in which some part of the cause is related to emotional factors.

pubic symphysis: The joint formed by union of bodies of the pubic bones in the midsagittal plane, characterized by a thick mass of fibrocartilage.

pulmonary: Pertaining to the lungs or related structures.

pulmonary alveoli: The air sacs of the lungs.

pulmonary artery: The major artery leading from the right ventricle to the lungs.

pulmonary circulation: The passage of blood from the right ventricle through the pulmonary artery and all of its branches and capillaries in the lungs, and then back to the left atrium through the pulmonary veins.

pulmonary contusion: A bruise of the pulmonary tissue.

pulmonary edema: The condition of the lungs when the pulmonary alveoli are filled with exudate and foam; usually secondary to left heart failure.

pulmonary embolism: Obstruction of the pulmonary arteries by emboli of any foreign material in the venous system.

pulmonary resuscitation: A technique providing artificial ventilation, through mouth to mouth, mouth to nose, or using any of the airway adjuncts.

pulmonary valve: The valve between the right ventricle and the pulmonary artery.

pulmonary veins: The veins that carry oxygenated blood from the lungs to the left atrium.

pulse: The rhythmic expansion and contraction of an arterial wall caused by ventricular systole and diastole.

pulse deficit: The difference in heart rate between apical rate and the rate obtained by palpating a peripheral artery.

pulse rate: The heart rate determined by counting the number of pulsations occurring in any superficial artery.

pump failure: A partial or total failure of the heart to pump blood effectively; causes cardiogenic shock.

pupil: The small opening in the center of the iris.

pupillary: Pertaining to the pupil.

Q

quadrant: One of the four quarters of the abdomen.

quadriplegia: A paralysis of both arms and legs.

R

raccoon sign: Bilateral symmetrical periorbital ecchymoses seen with basal skull fractures; also called coon's eyes.

Pertaining to the radial bone of the arm.

radiation: The process of emitting energy in a particulate or wave form.

radiation sickness: The condition that follows excessive irradiation from any source.

radius: The bone on the thumb side of the forearm.

rales: An abnormal breath sound produced by the flow of air through bronchi and bronchioles when they are constricted by spasm or filled by secretions.

rape: Sexual intercourse by force.

rash: An eruption of the skin, either localized or generalized.

rectum: The distal portion of the large intestine.

red blood cell: An erythrocyte; the cell that carries oxygen from alveoli to cell.

reflex: An involuntary muscular action in response to stimulation.

reflex action: An automatic reaction to a stimulus such as pulling one's hand away from something hot.

regurgitation: A backward flowing, as the casting up of undigested food from the stomach to the mouth.

renal: Pertaining to the kidney.

rescue: The freeing of persons from threatening or dangerous situations by prompt and vigorous action.

- **heavy rescue:** A rescue activity that involves the use of complicated tools, equipment, and procedures.
- **light rescue:** A rescue activity using simple means and a minimum of equipment.

respiration: The act of breathing; the exchange of oxygen and carbon dioxide in the tissues, lung.

- **internal respiration:** The exchange of oxygen and carbon dioxide at the cellular level.
- **external respiration:** The exchange of oxygen and carbon dioxide between the alveoli and blood in the lungs.

respiratory arrest: The cessation of breathing.

respiratory failure: A failure of the respiratory system to maintain an oxygen pressure greater than 60 torr and a carbon dioxide pressure of less than 50 torr.

respiratory system: A system of organs that controls the inspiration of oxygen and the expiration of carbon dioxide.

response time: The length of time required for the emergency medical services team to arrive at the scene of an emergency after receiving a call for help.

resuscitation: The act of reviving an unconscious patient.

retina: The lining of the back of the eye that receives visual image and transmits them via the optic nerve to the brain.

retro-: The prefix meaning located behind.

retrograde amnesia: An amnesia for events that occurred before a traumatic events or before the disease that caused the condition.

retyrosternal: Situated or occurring behind the sternum.

rhonchi: Coarse rattling sounds somewhat like snoring, usually caused by secretions in the bronchial tubes.

rib: One of the 24 bones forming the thoracic cavity wall.

rib cage: The skeletal framework of the chest; composed of the sternum, the ribs, and the thoracic vertebrae.

right heart failure: The failure of the right ventricle to pump blood effectively, causing backup of blood into the systemic veins, with consequent edema of body tissues.

rigid splint: A splint made of a firm material that can be applied to an injured extremity to prevent motion at the site of a fracture or dislocation.

Robinson stretcher: Split frame stretcher.

roller dressing: A strip of rolled-up material used for dressings.

rotation: The turning or movement of a body around its axis.

rupture: A tear or dissolution of continuity; a break of any organ or tissue.

S

s: Abbreviation for *sine*; without.

sacral: Pertaining to the sacrum, which is the fused bone of the five sacral vertebrae, part of the pelvic girdle.

sacroiliac joint: Left and right joining of the sacrum and ilia.

sacrum: The part of the lower spine made up of the five fused sacral vertebrae.

saline: Containing salt.

saline solution: A solution of any salt, but usually refers to a solution of sodium chloride.

saliva: The clear, alkaline fluid secreted by the salivary glands.

salivary glands: The glands that produce and secrete saliva, connected to the mouth by ducts.

salivation: An excess secretion of saliva.

scab: A crust formed by the coagulation of blood, pus, serum, or any combination of these on the surface of an ulcer, erosion, abrasion, or any other type of wound.

scapula: The shoulder blade.

scapular spine: The prominent triangular ridge on the dorsal aspect of the scapula.

sciatic nerve: A major collection of nerve fibers arising from the lumbosacral plexus and subserving most sensation of the lower extremity and motion of the leg and foot.

sclera: The white, opaque, outer layer of the eyeball.

scrotum: A pouch of thickened skin hanging at the base of the penis in the midline; contains the testes and their accessory ducts and vessels.

seal bark: A characteristic hoarse, barking cough heard in croup.

second degree burn: A burn penetrating beneath the superficial skin layers, producing edema and blisters.

sedative: A drug that depresses the activity of the central nervous system; has a calming effect.

seizure: A sudden attack or recurrence of a disease; a convulsion; an attack of epilepsy.

semiconscious: Stuporous; partially conscious.

seminal duct: The duct through which sperm pass into the seminal vesicles.

seminal vesicles: Either of the paired, sacculated pouches attached to the posterior past of the urinary bladder in the male; the duct of each joins the ductus deferens of the same side to form the ejaculatory duct.

senile: Pertaining to old age; implies loss of mental ability.

sense: Any one of the faculties by which the conditions or properties of things are perceived.

GLOSSARY
Common EMD Terminology

sensory nerves: The nerves that conduct impulses from various sense modalities through the spinal cord to the brain.

sepsis: The presence in the blood or other tissues of pathogenic microorganisms or their toxins.

septum: A dividing wall or partition, usually separating two cavities.

serum: The liquid portion of the blood containing all of the dissolved constituents except those used for clotting.

shivering: A trembling from cold or fear; produces heat by muscular contractions.

shock: A state of inadequate tissue perfusion that may be a result of pump failure (cardiogenic shock), volume loss or sequestration (hypovolemic shock), vasodilation (neurogenic shock), or any combination of these.

- **anaphylactic shock:** A rapidly occurring state of collapse caused by hypersensitivity to drugs or other foreign materials (insect venom, certain foods, inhaled allergenic); symptoms may include hives, wheezing, tissue edema, bronchospasm, vascular collapse.
- **septic shock:** A shock developing in the presence of, and as a result of, severe infection.

shoulder joint: A ball and socket joint between the head of the humerus and the glenoid fossa of the scapula.

SIDS: Abbreviation for sudden infant death syndrome.

sign: Any objective evidence of physical manifestation of a disease.

silent acute myocardial infarction: An acute myocardial infarction not accompanied by pain.

simple fracture: A fracture that is not compound; the skin is not broken over the break in the bone.

sinus: A general term for a hollow space, such as a channel for venous blood in the cranium or an air cavity in one of the facial bones.

six man stretcher pass: A method of transporting a patient on a litter over rough terrain; consists of passing a stretch by six persons in two parallel rows, the last two persons in each row moving ahead each time as the stretcher passes them.

skeletal muscle: The hard, bony structure that forms the main support of the body.

skin: The outer integument or covering of the body, consisting of the dermis and the epidermis; the largest organ of the body; contains various sensory and regulatory mechanisms.

skull: The bony structure surrounding the brain; consists of the cranial bones, facial bones, and the teeth.

sling: A triangular bandage applied around the neck to support an injured upper extremity; any wide or narrow material long enough to suspend an upper extremity by passing the material around the neck; used to support and protect an injury of the arm, shoulder, or clavicle.

sling and swathe: A bandage in which the arm is placed in a sling and is bound to the body by another bandage placed around the chest and arm to hold the arm close to the body.

slough: To cast of tissue, usually necrotic, separating from living tissue.

small intestine: The portion of the intestine between the stomach and colon.

sniffing position: The position for endotracheal intubation with the neck flexed and the head extended.

snowblindness: Obscured vision caused by sunlight reflected off snow.

socket: A hollow in a joint or other part into which corresponding organ or part fits.

soft tissue: The nonbony and noncartilaginous tissue of the body.

sporific: Producing deep sleep; usually considered a characteristic of a drug.

spasm: A sudden, violent, involuntary contraction of a muscle, or group of muscles, attended by pain and interference with function; a sudden but transitory constriction of a passage, canal, or orifice.

sphincter: A muscle that encircles a duct, tube, or opening in such a way that its contraction constricts the opening.

spinal canal: The tunnel through which the spinal cord passes.

spineboard: A wooden or metal device primarily used for extrication and transportation of patients with actual or suspected spinal injuries.

spiral fracture: A fracture in which the line of break runs diagonally around the long axis of the bone.

spirits: A preparation of volatile substances dissolved in alcohol.

spleen: The largest lymphatic organ of the body; located in the left upper quadrant of the abdomen.

spontaneous pneumothorax: A rupture of the lung parenchyma resulting in the accumulation of air in the pleural space without trauma.

sprain: A trauma to a joint causing injury to the ligaments.

GLOSSARY
Common EMD Terminology

sputum: Expectorated matter, especially mucus or matter resulting from diseases of the air passages.

status asthmaticus: A severe, prolonged asthmatic attack that cannot be broken with epinephrine.

status epilepticus: The occurrence of two or more seizures without a period of complete consciousness between them.

sterile: Free from living organisms, such as bacteria.

sterilize: To render sterile or free from bacterial contamination; to make an organism unable to reproduce.

sternum: The long, flat bone located in the midline in the anterior part of the thoracic cage; articulates above with the clavicles and along the sides with the cartilages of the first seven ribs.

stillbirth: The birth of a dead fetus.

stimulant: Any agent that increases the level of bodily activity.

stomach: The hollow digestive organ in the epigastrium that receives food from the esophagus.

stool: Feces; the matter discharged at defecation.

stove-in chest: See flail chest.

straddle load: A method for placing a patient on a long spineboard by straddling both board and patient and sliding the patient on the board.

strain: An injury to a muscle caused by a violent contraction or an excessive forcible stretching.

stress: Any chemical, physical, or emotional factor that causes mental or bodily tension; may be a cause of disease.

stretcher: A carrying device that enables two or more persons to lift and carry a patient who is lying down.

- **ambulance stretcher:** A carrying device used to transport patients to, from, or in an ambulance; usually wheeled but also portable.
- **army stretcher:** A folding carrying device made of wooden poles and covered with canvas with short, folding legs.

basket stretcher: A litter designed for the removal of patients over rough terrain or from heights; consists of an oblong plastic shell with low sides.

split-frame stretcher: A litter that can be divided longitudinally, slipped beneath the patient from each side, and locked at each end, providing an extrication as well as a transport device.

stricture: The narrowing of a duct or any natural passage by an inflammatory process, trauma, fibrosis, muscular spasm, or pressure from adjacent structures.

stridor: A harsh, high-pitched respiratory sound associated with sever upper airway obstruction.

stroke: A cerebrovascular accident of sudden onset.

stupor: A state of reduced sensitivity; mental confusion.

subdural: Refers to any lesion in the brain that occurs beneath the dura.

subdural hematoma: A collection of blood or clot between the dura mater and arachnoid usually caused by a laceration or rupture of a meningeal blood vessel.

sublingual: Under the tongue.

substernal: Beneath the sternum; retrosternal.

subtrochanteric area: The area below any trochanter.

sucking chest wound: An open pneumothorax.

sudden infant death syndrome (SIDS): A sudden, unexpected death of an infant within the first six months of life, crib death.

suffocate: To impede respiration, to asphyxiate.

suicide: The act of deliberately taking one's own life.

sunstroke: A form of heatstroke due to prolonged sun exposure.

superficial: Confined to or pertaining to the surface.

superior: In anatomy, used to refer to an organ or part that is located above another organ or part.

superior vena cava: One of the two largest veins in the body that empties venous blood into the right atrium; receives blood from the upper extremities head and neck.

supinate: To turn the forearm so that the palm faces upward.

supine: Lying horizontal in a face-upward position.

suppository: A drug mixed in a firm base that melts at body temperature, shaped to fit various body orifices;

such as the rectum, urethra and vagina.

suppuration: Formation or discharge of pus.

surgery: The branch of medicine that deals with trauma and diseases that requires operative intervention.

suture: A type of fibrous joint in which the opposed surfaces are closely united; also, the material used in closing a surgical wound, or repairing a gaping wound.

swathe: A cravat tied around the body to decrease movement of a part.

sweat gland: A gland that secretes water and electrolytes through the skin.

sympathetic nervous system: A subdivision of the autonomic nervous system that governs the body's reaction to stresses by stimulating the heart, bronchodilation, and other reactions.

symptom: A subjective sensation or awareness of disturbance of bodily function.

syncope: Fainting; a brief period of unconsciousness.

syndrome: A complex of symptoms and signs characteristic of a condition.

systemic: Refers to anything that affects the body as a whole.

systemic circulation: The passage of blood from the left ventricle through the aorta and all of its branches and capillaries and back to the right atrium through the venules, veins, and venae cavae.

T

tachyrhythmia: A rapid heart rate, over 120 to 160 per minute.

tachycardia: Abnormally rapid heart rate, over 100 beats per minute.

tachypnea: Excessively rapid rate of respiration, over 25 per minute in adults.

tarsal: Pertaining to the tarsus, the ankle.

temperature: The degree of heat of a living body; varies in cold-blooded animals with environmental temperature and is constant, with a narrow range, for warm-blooded animals; 98.6 degrees Fahrenheit oral temperature and 99.6 degrees rectal are considered normal for humans.

temple: The portion of the head above and anterior to the ears and above the zygomatic arch.

temporal artery: The artery located on either side of the face above and in front of the upper portion of the ear; supplies blood to the scalp.

temporal lobe: A region of the cerebral hemisphere below and lateral to the frontal and occipital lobes; contains the control center for speech.

temporomandibular joint (TM joint): Mandibular joint, the articulation between the head of the mandible and the mandibular fossa and articular tubercle of the temporal bone.

tendon: A tough band of dense, fibrous, connective tissue that attaches muscles to bone and other parts.

tension pneumothorax: A situation in which air enters the pleural space through a defective one-way valve in the lung causing progressive increase in intrapleural pressure, with lung collapse and impairment of circulation.

testes: The male reproductive glands that produce spermatozoa.

tetanus: An infectious disease caused by an exotoxin of a bacteria, *Clostridium tetani*, that is usually introduced through a wound, characterized by extreme body rigidity and spasms, trismus, or opisthotonos, of voluntary body muscles.

thalamus: Either one or two grey matter masses situated on either side of the third ventricle near the brain stem; all sensory stimuli except olfactory, are received, synthesized, associated, and relayed to specific cortical areas of the brain.

thermal: Pertaining to heat.

thigh: The portion of the lower extremity between the hip and knee.

third degree burn: A full-thickness burn destroying all skin layers and underlying tissues; has a charred or white, leathery appearance; insensitive.

Thomas splint: A rigid metal or plastic splint that provides support for a steady longitudinal pull on the lower extremity.

thoracic: Pertaining to the chest.

thoracic cage: The rib cage.

thoracic cavity: The space within the chest walls between the diaphragm and the base of the neck.

thoracic spine: The vertebrae, usually 12 in number, between the cervical spine and the lumbar spine.

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GLOSSARY
Common EMD Terminology

thorax: The portion of the trunk between the neck and the diaphragm, encased by the ribs; chest.

thready pulse: A pulse that is weak or scarcely audible, characteristic of a person in shock.

three-man lift: A method by which a number of persons may lift and move a patient smoothly.

three-point suspension: The distribution of weight of a patient while the patient is being moved; trunk, buttocks, and legs are separately supported.

thyroid cartilage: The largest of the laryngeal cartilages, the Adam's apple.

thyroid gland: A ductless endocrine gland lying in front of the trachea; produces hormones involved in metabolism regulation.

tibia: The larger of the two bones in the leg; the shin bone.

tic: An involuntary spasmodic twitching, usually of the face.

tinnitus: A ringing, tinkling, buzzing, or roaring noise in the ears.

tissue: An aggregation of similarly specialized cells and their intercellular substance united in the performance of a particular function.

tolerance: The state of enduring, or of less susceptibility to the effects of a drug or poison after repeated doses.

torsion: Twisting.

tourniquet: A constrictive device used on the extremities to impede venous blood return to the heart or obstruct arterial blood flow to the extremities.

toxemia: A condition wherein the blood contains poisonous products manufactured by body cells or microorganisms.

toxemia of pregnancy: A condition sometimes occurring during the second half of pregnancy manifested by symptoms of eclampsia.

toxin: Any poison manufactured by plant or animal life.

toxoid: A chemically modified toxin that, when injected, stimulates the development of immunity to a specific disease.

trachea: The cartilaginous tube extending from the larynx to its division into the primary bronchi; windpipe.

tracheostomy tube: A tube inserted into an opening made by a tracheotomy.

traction: The act of exerting a pulling force.

trade name: The name under which a drug is marketed by a given manufacturer; also referred to as the brand or proprietary name.

transfusion: An injection of blood, saline solution, or other liquid into a vein.

transverse colon: The division of the large intestine that crosses the abdomen, located between the ascending colon and the descending colon.

transverse fracture: A fracture in which the line of break forms a right angle to the axis of the bone.

trauma:

Surgical definition: physical injury.

Psychiatric definition: emotional distress, relating to a specific incident.

traumatic asphyxia: A syndrome resulting from a very severe compression injury of the chest; cyanosis of the face and neck, bulging of the eyes, and a flail chest are external results.

tremor: An involuntary trembling or quivering of voluntary muscles.

trench foot: A foot condition caused by exposure to cold and dampness.

triage: A system used for sorting patients to determine the order in which they will receive medical attention.

triangular bandage: A piece of cloth cut in the shape of a right-handed triangle; used as a sling, or folded for a cravat bandage.

trunk: The body, excluding the head and limbs; torso.

tympanic membrane: The eardrum.

U

ulcer: An open lesion of the skin or mucous membrane.

ulna: The larger bone of the forearm, on the side opposite that of the thumb.

umbilical cord: A flexible structure connecting the fetus to the placenta.

umbilicus: The naval.

unconscious: Without awareness, the state of being comatose.

universal dressing: A large (9 by 36 inches) dressing of multilayered material that can be used open, folded, or rolled to cover most wounds, to pad splints, or to form a cervical collar.

ureter: Either of the tubes that convey urine from the kidneys to the bladder.

GLOSSARY
Common EMD Terminology

urethra: The canal that leads urine from the bladder to the urethral orifice.

urine: The fluid secreted from the blood by the kidneys, stored in the bladder, and discharged through the kidneys.

urticaria: Hives.

uterus: The muscular organ that holds and nourishes the fetus, opening into the vagina through the cervix; the womb.

V

vagina: The canal in the female extending from the uterus to the vulva; the birth canal.

vascular: Relating to, or containing blood vessels.

vasoconstriction: The narrowing of the diameter of a blood vessel.

vasoconstrictor: A drug, nerve, hormone, or other agent that narrows the diameter of blood vessels.

vasodilator: A drug, nerve, hormone, or other substance that dilates or widens the diameter of blood vessels.

vasovagal attack: A syndrome consisting of hypertension, sweating, anxiety, nausea, and occasionally, syncope.

VD: Abbreviation for venereal disease.

vein: Any blood vessel that carries blood from the tissues to the heart.

  femoral vein: A continuation of the popliteal vein that becomes the external iliac vein, the major vein draining the leg.

  pulmonary vein: One of four veins that returns aerated blood from the lungs to the left atrium of the heart.

venae cavae: The two largest veins of the body returning blood to the right atrium.

  inferior vena cava: Principal vein returning blood from the lower portion of the body.

  superior vena cava: Principal vein returning blood from the upper portion of the body.

venereal disease: A disease generally acquired through sexual intercourse with an infected partner; syphilis, gonorrhea, and chancroid are common ones; Herpes II is becoming epidemic.

venom: A poison, usually derived from reptiles or insects.

venous blood: Unoxygenated blood, containing hemoglobin in the carboxyhemoglobin state.

ventilation: Breathing; supplying fresh air to the lungs.

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ventral: Referring to the abdomen; directed toward or situated on the belly surface; opposite of dorsal.

ventricles: The thick-walled, muscular chambers in the heart that receive blood from the atrium and force blood into the arteries; also any small cavities; cerebral chambers containing cerebrospinal fluid.
left ventricle: The greater chamber, on the left side of the heart, that propels oxygenated blood through the aorta.
right ventricle: The lesser chamber, on the right side of the heart that propels unoxygenated blood through the pulmonary artery and into the lungs.
right and left, third and fourth ventricles: cerebral ventricles.

ventricular aneurysm: A localized dilation or ballooning of the wall of the ventricle, usually the left.

ventricular fibrillation: A rapid, tremulous, and ineffectual contraction of the cardiac myofibrils, producing no cardiac output; cardiac arrest.

ventricular standstill: Asystole; no muscular contraction of the ventricles.

ventricular tachycardia: A serious cardiac arrhythmia with rapid, regular, or slight irregular, ventricular contractions; AV dissociation is present, and often there is no cardiac output.

Venturi mask: A brand of breathing unit that has a graduated valve for setting a specific concentration of oxygen delivered through the mask.

venule: A very small vein.

vertebra: Any one of the 33 bones of the spinal column.
cervical vertebrae: The upper seven vertebrae, forming the skeleton of the neck.
coccygeal vertebrae: The three to five lower rudimentary vertebrae column that form the coccyx or tail bone.
lumbar vertebrae: The five fused vertebrae of the vertebral column that form the sacrum, a part of the pelvic girdle.
thoracic vertebrae: The 12 vertebrae of the vertebral column between the cervical vertebrae and the lumbar vertebrae.

vertebral: Pertaining to the vertebrae.

vertebral arch: The posterior projection of each vertebra through which the spinal cord passes.

vertebral body: The round solid bone forming the front part of the vertebra; articulates with the cartilaginous pads between the vertebrae.

vertebral spine: The body projection dorsal to the arch; the spinous process of the vertebra.

GLOSSARY
Common EMD Terminology

vertigo: A dizziness; an hallucination of movement; a sensation as if the external world is spinning; may be right or left, upward or downward.

vestigial: Pertaining to a small or imperfectly developed body part or organ that remains from one more fully developed in an earlier stage of the individual, or in the past generations, or in closely related forms.

viable: Living; capable of living.

vial: A small glass container.

viscera: The internal organs of the body.

vital signs: The indication of life through values that reflect mental status, blood pressure, pulse rate, and respiration rate and depth.

vocal cords: Either of two pairs of folds of mucous membrane in the larynx that project into the cavity of the larynx; activated by the passing of air over the folds, causing vibration; source of the voice sound.

voice box: The larynx.

voluntary: Of, relating to, or acting under obedience to the will.

voluntary commitment: The commitment of a patient to a hospital for treatment or observation with the patient's consent.

voluntary muscle: Any muscle that functions under the control of the will.

vomiting: The matter ejected from the stomach by vomiting.

vulva: The external parts of the female genitalia.

W

warning lights: The flashing lights that serve as a signal on an ambulance or other emergency vehicles.

warning signal: An intermittent audible signal of varying tones made by a siren to clear the way for an emergency vehicle; used when going on a call.

wheal: A swelling of the skin, produced by a sting, an injection, external force, or internal reaction.

wheeze: A high-pitched, whistling sound characterizing an obstruction or spasm of the lower airways.

wheezing: Breathing noisily and with difficulty.

wind-chill factor: The relationship of wind velocity and temperature in determining the effect of the factor on a living organism.

windpipe: The trachea.

white blood cells: Leukocyte; cellular element of the blood that produces antibodies and participates in the inflammatory responses.

withdrawal: A symptom produced by abstinence from a drug to which one is addicted, or has been taking.

womb: The uterus.

wrecking bar: A short, metal crowbar with a slight bend at one end for prying and claw for pulling nails at the other end; used to remove victims trapped in vehicles.

wrist: The joint or the region of the joint between the forearm and the hand.

X

X-ray: Electromagnetic radiation; roentgen ray.

Xylocaine: Trade name for lidocaine, a local anesthetic; and a depressor of cardiac premature ventricular beats.

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